

Volume 45 number 2 Summer 2004



Special issue: Mediated Times

Brunson

Kuhn

Mulvey

Scannell

Schwarz

Screen Studies Conference

2 – 4 July 2004
University of Glasgow

The 14th *Screen Studies Conference*, programmed by Karen Lury, will offer a mix of keynote addresses, panels and workshops on a wide range of screen studies topics, with a special strand on *the child in film and television*.

Please check website for details or contact Caroline Beven to be included on our e-mailing list or to request a registration form.

Screen
Gilmorehill Centre, University of Glasgow
Glasgow G12 8QQ
t 0141 330 5035 • f 0141 330 3515
screen@arts.gla.ac.uk
www.screen.arts.gla.ac.uk

45:2 Summer 2004

issue editors

Annette Kuhn
Bill Schwarz

Special issue: Mediated Times

BILL SCHWARZ: Media times/historical times 93

ANNETTE KUHN: Heterotopia, heterochronia: place and time in cinema memory 106

CHARLOTTE BRUNSDON: Taste and time on television 115

PADDY SCANNELL: Broadcasting historiography and historicality 130

LAURA MULVEY: Passing time: reflections on cinema from a new technological age 142

reviews

J.P. TELLOTTE: Scott Bukatman, *Matters of Gravity: Special Effects and Supermen in the 20th Century*; Michele Pierson, *Special Effects: Still in Search of Wonder*; Aylish Wood, *Technoscience in Contemporary American Film: Beyond Science Fiction* 156

MARTINE BEUGNET: Alex Hughes and James S. Williams (eds), *Gender in French Cinema*; Carrie Tarr with Brigitte Rollet, *Cinema and the Second Sex: Women's Filmmaking in France in the 1980s and 1990s*; James S. Williams (ed.), *Revisioning Duras: Film, Race, Sex* 162

GARY NEEDHAM: Lalitha Gopalan, *Cinema of Interruptions: Action Genres in Contemporary Indian Cinema* 168

cover illustration

Still from *The Man with a Movie Camera* (Dziga Vertov, USSR, 1928).

Media times/historical times

BILL SCHWARZ

There is a myriad of different ways of thinking the relationship between media and history. My concern, and that of the four essays which follow in this special issue, is with the systems of mechanical reproduction – especially radio, cinema and television – which dominated popular life throughout much of the world for the first seven or eight decades of the twentieth century, before the onset of new (in shorthand here, digital) technologies. My principal question, however, is less how one might situate the internal histories of these media forms than how one might conceptualize the history of the wider society *after* radio, cinema and television. How can we comprehend the history of mass-mediated societies? This, in turn, requires us to unearth the complex modes of *time* which underwrote the mass media of the twentieth century. Cinema, radio and television not only created new narrative times and organized new sensations of time (real and imagined, so long as these distinctions work); they also depended for their existence on unprecedented time frames and created new indices of social, or historical, time. How can we grasp the transactions between mediated times and historical time?

This is not the most common approach to thinking the connections between media and history. Amongst historians, certainly, there is still a powerful tendency to raid social fictions – the novel, films – for historical evidence. Just consider, for example, how a raft of historical readings of popular sentiment in Britain during World War II is culled from unencumbered exegesis of wartime films. In practice, this is a method of historical interpretation which differs little, if at all, from historians working on the 1840s and exploiting the novels of the period for social comment or colour. Although in itself not necessarily a culpable way of working, it leaves much unthought and unsaid. Most of

all, it exhibits no curiosity about the *form* in which the narrative itself is embedded. That, really, is the point: the need, as Barthes recognized early on, for 'a little formalism'. Form organizes what is possible in narrative – what is thinkable within its structures. Different forms create different possibilities for thought – hence the importance, paradoxically, of formalism for thinking historically. (The cognitive work involved in seeing a film and in reading a novel is not the same.) But Barthes's qualification – 'a little formalism' – is decisive too, if analytically indeterminate. 'A little formalism' represents the precondition for thinking concretely and historically. Radio, cinema, television: all have made new thought possible, not just in terms of what people can think but how they think, and how they imagine both their inner worlds and their larger social lives. This is a history which is largely invisible, working deep in the domains of cognition, memory, fantasy and embodiment. To reach these levels of social life, in all their turbulence, historians need to think more carefully about media forms; and, beyond that, to think too about the interconnections between the history of media forms and what some years ago Geoffrey Nowell-Smith described in these pages as a 'history of subjectivities'.¹

Even where we might have expected to encounter historians reflecting on these issues, we tend to find instead a disconcerting muteness. Concern with historical time only very obliquely addresses the question of mediated times. For example, a number of years ago a group of distinguished historians produced a spirited collection of essays under the title *The Invention of Tradition*, which quite properly has become a classic.² The book highlighted the degree to which, in the metropolitan nations at the end of the nineteenth century, the vogue for fabricating traditions took off across a range of disparate institutions of social life: for all the particularity of each local institution, invented traditions were marked by their commonality. Institutions widely separated socially and spatially were equally subject to the same phenomenon. The essays were powerful in their descriptive vitality, illuminating a social process which until then historians (but not only historians) had barely noticed; equally, however, they were short on conceptually thinking through the anterior social transformations which gave life to this curious phenomenon. And since the publication of the volume, historiographical debate on the issue has not advanced at all, as if the required bibliographic reference tells us all we need to know. Looking back, we can see that what was most glaringly absent in the initial discussion was acknowledgement, precisely, of new forms of mediation. For tradition to be mass produced – and this indeed was distinctive in these years – the means for mechanical reproduction of cultural artefacts were necessary. The peculiarly imagined dimensions of these novel, putatively traditional, constructs were closely connected to their mediated conditions of existence: not only did these invented traditions allow new modes of community to be imagined in the present, they encouraged a new, imaginary, relationship between

¹ Geoffrey Nowell-Smith, 'On history and the cinema', *Screen*, vol. 31, no. 2 (1990), pp. 160–71.

² Eric Hobsbawm and Terence Ranger (eds), *The Invention of Tradition* (Cambridge: Cambridge University Press, 1983).

3 *Speaking into Air: a History of the Idea of Communication* (Chicago, IL: University of Chicago Press, 1999), p. 139.

present and past. Or as John Durham Peters puts this: 'the realm of immortals had expanded from the remembered dead to the recorded and transmitted dead'.³ *The Invention of Tradition* portrays many of the cultural mechanisms we have come to associate with modernity, but does so with no explicit engagement with the question of mass-mediation.

There are, however, many alternative approaches lying outside the contemporary conventions of historical thought which do just that. Raymond Williams often indicated that his early writings could be characterized as constituting a history of cultural forms – as good a working definition of cultural studies as any – and came back to similar formulations towards the end of his life. The kind of 'historical poetics' deployed by Bakhtin to explain the emergence of the novel remains a fantastically rich resource, bringing into the light of day the historical connections between the arena of fictional narrative in the novel and the capacity to imagine, in the social arena, the dispositions of popular life. Or in similar mode, Benedict Anderson's proposition that a mediated print-capitalism created the conditions by which nations could be imagined is of great potential service to historical explanation, drawing attention to new systems of social epistemology.

There is, in addition, the body of work which follows in the slipstream of Simmel, Kracauer and Benjamin, with Baudelaire as a precursor and with perhaps Marshall Berman as an oblique, more libertarian, late reincarnation. Benjamin is central here, for he above all strove to uncover the modes in which, deep in the heart of a commodified, standardized culture, there existed the potential for disequilibrium, for reenchantment and for the reclamation of 'experience' – countervailing forces he believed to be especially manifest in the cinema. Contemporary appropriations of these theorizations have been inspired – against Adorno – by the possibilities of disinterring a vital, liberatory rendition of modernity; they have frequently been informed by a feminist regard for the politics of lived experience; and, most tantalizing of all, they have set out to relocate modernism from the canvas and the page to the street. Established now as a distinct intellectual perspective, the body of work influenced by Simmel, Kracauer and Benjamin is perhaps more self-conscious than any other about the cognitive consequences of the mass-mediation of modern societies. Its range of concerns is well known. Focusing almost exclusively on France, Germany, the USA or Britain from about the 1890s to the 1920s or 1930s, it explores the variant play of 'distraction' as it coalesced around new means of transport and communication, new experiences of urban living and consumption, and the new culture industries of mechanical reproduction, in which cinema was pre-eminent.

We are now familiar with the *flâneurs* who populated the metropolitan streets of Berlin and Paris, London and Chicago in the early decades of the last century – who embodied fashion, shopped in

4 For important anticipations of these developments, see Nancy Armstrong, *Fiction in the Age of Photography: the Legacy of British Realism* (Cambridge, MA: Harvard University Press, 1999).

5 Leo Charney and Vanessa Schwartz (eds), 'Introduction' to *Cinema and the Invention of Modern Life* (Berkeley, CA: University of California Press, 1995), pp. 1-2.

6 See, for example, Mica Nava and Alan O'Shea (eds), *Modern Times: Reflections on a Century of English Modernity* (London: Routledge, 1996); Becky Conekin, Frank Mort and Chris Waters (eds), *Moments of Modernity: Reconstructing Britain, 1945-1964* (London: Rivers Oram, 1999); Martin Daunton and Bernhard Rieger (eds), *Meanings of Modernity: Britain from the Late-Victorian Era to World War II* (Oxford: Berg, 2001). I have tried to explore how these developments reordered the political field in Bill Schwarz, 'Politics and rhetoric in the age of mass culture', *History Workshop Journal*, no. 46 (1998).

department stores and (with due narcissism) contemplated their own image in shining new glass shop fronts, revelled in the flow of urban movement, entertained advanced ideas about social convention ... and went to the movies. In these readings, the division between the spectacle of the cinema and the spectacle of the city is fluid, with new modes of perception crossing back and forth between the lived realities of the city and the spectatorship of the cinema in such a way that the urban world itself becomes the terrain of the scopic.⁴ The most succinct, and the strongest, formulation of this approach comes in the title of a volume of essays which confront different aspects of this theme: *Cinema and the Invention of Modern Life*. 'These essays', the editors write, 'collectively argue that the emergence of cinema might be characterized as both inevitable and redundant. The culture of modernity rendered inevitable something like cinema, since cinema's characteristics evolved from the traits that defined modern life in general.'⁵

The impact of this thinking has been profound, enriching our grasp of the historical past in the early moments of the epoch of mechanical cultural reproduction. But these are insights which, for all their value, remain relatively self-contained – and perhaps even come too easily to mind. They tell us much about their own preferred, privileged locations. They have not, though, influenced significantly what we might call the conventional fields of social, political, or even cultural, history. Nor I think do these appropriations of Simmel, Kracauer and Benjamin pay sufficient heed to the question of *time*, an issue which lies at the heart of their theorizations. We need to have a clearer sense of the wider social transformations, the wider influences of mediated relations. In the field of the history of Britain, for example, some of this work has started, attempting to ground historically these new, emergent cultures of modernity, and attempting, too, to think how the epistemic space of the society as a whole was transformed – or how, in other words, a society can know itself.⁶

A marvellous example, from the USA, is Miriam Hansen's *Babel and Babylon*, an analysis of silent film which explicitly follows in the tradition of Kracauer and Benjamin. This is a finely researched work, in which historical complexity prevails over easy abstraction. Hansen has much of great interest to say about periodization. In a riveting argument, she suggests that the figure of the film spectator was a relative latecomer to the institution of the cinema – produced, in effect, by a combination of industry intervention, the spatial organization of the film theatres, and the forms of address inscribed in what were becoming increasingly conventional modes of film narrative. Most of all, her central interest lies in the emergence of a new public sphere – uneven in its arrival, contradictory in form, but constitutive of a new culture for all that. Hers is an embodied, concrete public, composed especially by the new female audiences, and by the migrants to the USA who, largely, were denied effective access to other domains of

7 Miriam Hansen, *Babel and Babylon: Spectatorship in American Silent Film* (Cambridge, MA: Harvard University Press, 1991), p. 3.

8 Lesley Johnson, *The Unseen Voice: a Cultural Study of Early Australian Radio* (London: Routledge, 1988); Susan Douglas, *Inventing American Broadcasting, 1899–1922* (Baltimore, MD: Johns Hopkins University Press, 1987); Paddy Scannell and David Cardiff, *A Social History of Broadcasting, Volume I, 1922–1939: Serving the Nation* (Oxford: Blackwell, 1991).

9 Paddy Scannell, 'Public service broadcasting and modern life', in Paddy Scannell, Philip Schlesinger and Colin Sparks (eds), *Culture and Power: a Media, Culture and Society Reader* (London: Sage, 1992), p. 321.

10 Hansen has written in many places about Benjamin and Kracauer; most usefully, for my

public life in the nation. Drawing from Habermas and from his important interlocutors, Oskar Negt and Alexander Kluge, she sets out to demonstrate the manner in which cinema provided a critical, cognitive axis by which public life itself came to be defined and known. 'What changed were not only the standards by which certain realms of experience could be articulated in public while others remained private, but also the methods by which such delineations were drawn.'⁷

There are, of course, other theoretical routes which offer similar insights. The more innovative histories of radio – Lesley Johnson's account of Australian radio; Susan Douglas's study of radio in the USA; or Paddy Scannell's and David Cardiff's work on the British story – provide different, but in many ways complementary, conceptual conclusions.⁸ Scannell's discussion of the early years of the BBC, for example, similarly concentrates on the constitution of the radio listener – or 'the listener-in', as he (generally it was a citizenly 'he' in the early moment) was conceived. Rather like Hansen's cinema spectator, this was a figure imagined into life as a consequence of the technology of the radio receiver, of the intervention of the BBC itself as a corporate body driven by a range of (conflicting) civilizing precepts, and by the forms of address inherent in the various genres of radio programming broadcast. And rather like Hansen's reconstruction of silent cinema, radio in Britain created the conceptual possibilities for reimagining what public life could be and do. If Scannell's earliest approaches were conducted under the banner of social history, he moved subsequently, for a while, closer to Habermas. But, like Hansen again, he too sought a less formal, less abstract, less reasoning, listening audience – one embedded, crucially, in its domestic conditions of existence. Radio, for Scannell, represented a particular articulation of public life – or 'publicness' as he chose to term it – whose distinctive feature was to 'resocialize' private life. 'What', he asks, in a question startling in its directness, 'was public life before broadcasting?'⁹ In order to reach the distinctive features of this radio public – or of the publicness of early British radio – he too needed to determine what was distinctive about the media form of radio. If cinema studies has concentrated most of all on the conditions of spectatorship, Scannell found himself engaging with the conditions of 'talkability' – not only what could, or could not, be talked about in public, but the grain of the radio voice. Scannell's earlier espousal of social history, after the Habermas moment, transmuted into an encounter first with ethnmethodology and thence with phenomenology. 'Talkability' in this scheme of things thus comes to signify, in all its ambivalence and variants, that distinctive combination of private and public speech that was peculiar to the *form* of early radio in Britain – and has remained, in many mutations, since.¹⁰

Although Scannell and Hansen owe a shared debt to Habermas, Hansen's theorizations of the cognitive and institutional possibilities of

purposes here, is her 'America, Paris, the Alps: Kracauer (and Benjamin) on cinema and modernity', in Charney and Schwarz (eds), *Cinema and the Invention of Modern Life*. My undue compression of the Scannell archive draws from: A *Social History of Broadcasting*, 'Public service broadcasting'; *Broadcast Talk* (London: Sage, 1991); *Radio, Television and Modern Life: a Phenomenological Approach* (Oxford: Blackwell, 1996). I commented on *A Social History in Screen*, vol. 33, no. 4 (1992), pp. 455–61.

public life came to derive principally from Kracauer and Benjamin, while Scannell's derived from a loosely Heideggerian phenomenology. (For all the contrasts, the Weimar provenance in each case is intriguing.) Public life, in its gendered and contingent manifestations, mainly – though not exclusively – appears in both these accounts as a *spatial* matter. Embodied audiences exist in embodied, sensuous locations, be it the nickelodeon, the kitchen or the parlour. New mediated locations were constituted by, respectively, Hansen's cinema and Scannell's radio, as locations in which audiences could figuratively move and experience themselves as modern subjects. This figurative inhabitation of faraway places, seen or heard, is indeed a decisive property of what we take to be modern life. And yet . . . cinema is essentially a moving image, radio essentially an aural medium inseparable from its temporal existence. What happens if we shift the focus from space to time?

As all the primers tell us, the category of time was incessantly addressed in the works of high modernism, and (as the intellectuals of high modernism half suspected) incessantly redramatized in carnivalesque low-life. To view modern life in all its mediations from the perspective of time is to revert to convention. It became apparent in the early years of the twentieth century that time, as much as space, operated according to rules which were not easily grasped by the everyday world of sense-experience. Such discoveries were manifest in Cubism, in montage, in theories of relativity, in conceptualizations of memory, in urban life, and so on. Yet talismanic invocations of Cubism, or of montage, may obscure more than they reveal. The ubiquity of a plethora of competing conceptions of time may itself be a problem. Kracauer suggests something like this when he describes how, at the end of his intellectual life, he suddenly saw anew the significance of historical time:

recently I suddenly discovered that my interest in history . . . actually grew out of the ideas I had tried to implement in my *Theory of Film*. In turning to history, I just continued to think along the lines manifest in that book. And all the time I had not been aware of this, but rather assumed that I was moving on new ground and thus escaping the preoccupations which had kept me under their spell for too long a time. Once I had discovered that I actually became absorbed in history not because it was extraneous to my drawn-out previous concerns but because it enabled me to apply to a much wider field what I had thought before. I realized in a flash the many existing parallels between history and the photographic media, historical reality and camera-reality. . . . Had I been struck by blindness up to this moment? Strange power of the subconscious which keeps hidden from you what is so obvious and crystal-clear when it eventually reveals itself.¹¹

This belated recognition of the centrality of historical time is intriguing.

¹¹ *History: the Last Things Before the Last* (Princeton, NJ: Markus Wiener, 1995), pp. 3–4. See especially the chapter 'Ahasuerus, or the riddle of time'.

But Kracauer's words are important in another respect. He explicitly states that camera-reality (or what I call here media times) and historical reality (or historical time) are not antithetical. Minimally, in his account, camera-reality shares some structural, or formal, qualities with historical reality. For my argument here, this is decisive.

Media times represent both the narrative times of particular artefacts and the new sensations or experiences of time which are shaped by the social institutions of the electronic mass media (the cinema, the radio, the television). Conventionally, historical time is understood as external, social, and in some sense objective. It carries the ghosts of Hegel and Marx, for whom history is not only the story of human life, but the story of how humanity realizes itself as social and *as human*. In fact, historians invariably have to arrive at a point at which they concede that historical time is not the immediate distillation, in the mind, of the historical process, but a product of the human imagination. To this degree, at least, media times infiltrate the imaginings of historical time.¹²

12 In this respect it is vital to draw attention to the Simmel which is not read within media or cultural studies, most of all, 'The problem of historical time' in his *Essays on Interpretation in Social Science* (Manchester: Manchester University Press, 1980); and 'How is history possible?', in his *On Individuality and Social Forms: Selected Writings* (Chicago, IL: University of Chicago Press, 1971).

13 Raymond Williams, 'Drama in a dramatised society', in *Raymond Williams on Television: Selected Writings* (London: Routledge, 1989); Mikhail Bakhtin, *The Dialogic Imagination* (Austin, TX: University of Texas Press, 1981), p. 84; Benedict Anderson, *Imagined Communities: Reflections on the Origins and Spread of Nationalism* (London: Verso, 1984), ch. 4.

14 Walter Benjamin, *Illuminations* (New York, NY: Schocken, 1969), p. 236; translation adapted by Hansen, *Babel and Babylon*, p. 111.

15 On cinema as a heterotopia, see also Annette Kuhn's contribution to this issue.

16 Hansen, *Babel and Babylon*, p. 108; the citation is from Foucault's 'Of other spaces', *Diacritics*, vol. 16, no. 1 (1986).

As I hinted, the connections between narrative time and historical time preoccupied many of the critics I have mentioned, whether it be Raymond Williams's analysis of a 'dramatized society'; Bakhtin's theory of chronotope (the organization of time and space which makes a novel 'historical' or, in Bakhtin's own words, 'Time thickens, takes on flesh, becomes artistically visible; likewise space becomes charged and responsive to the movements of time, plot and history'); Benedict Anderson's conviction that nations are temporal first, spatial second; or the determination of the contributors to *The Invention of Tradition* to show that at the end of the nineteenth century the imaginings of the past were themselves historically transformed.¹³

Hansen, in turn, indicates that her own reading of early cinema sticks close to Benjamin's famous formulation on the upheavals consequent upon cinematic time:

Our taverns and city streets, our offices and furnished rooms, our train stations and factories appeared to have us locked up beyond hope. Then came film and exploded this prison-world with the dynamite of one-tenth seconds, so that now in the midst of its far-flung ruins and debris, we calmly embark on adventurous travels.¹⁴

But of all her arguments, the temporal is the least developed. She introduces the idea (from Foucault) that the cinema may function as a heterotopia – as a kind of utopian counter-space to the standardized world at large.¹⁵ She quotes from Foucault to explain how heterotopias are linked 'to time in its most fleeting, transitory, precarious aspect, to time in the mode of festival'.¹⁶ This proposition is given substance mainly with reference to the migrant experience of US cinema. 'The jumble of strange and familiar, of old and new, of ordinary and exotic,

made the movies an objective correlate of the immigrant experience.' Cinema too, she contends, may have worked to 'actualize' memories of departed lands.¹⁷

In a book rich in insight, these serve as little more than hints. But in the spirit of Kracauer, Hansen is aiming to grasp the transactions between cinematic time, in all its dimensions, and historical time. The reason for my emphasis of this point – in Hansen, in Kracauer and Benjamin, and in others – is straightforward. Theories of historical time have been notably weak in engaging with the manifold times that characterize, specifically, mass-mediated societies. My guess is that *The Invention of Tradition* is not aberrant in this respect, but symptomatic.

Of late, I have been much struck by a comment made by an aged Fernand Braudel. When asked to reflect on his contribution to historical thought he had only this to say: 'My great problem, the only problem I had to resolve, was to show that time moves at different speeds'.¹⁸ I like the perversity of this recollection – as if differential time were the only issue this great thinker felt obliged to confront. But I also think it appropriate to respond to the claim at face value. The question of historical time has been curiously neglected by contemporary anglophone historians, at least as a conceptual problem. Although he was never able to resolve the issue to his satisfaction, for much of his life Braudel was wont to assume that the proper preoccupation of historians was with time. He assumed, for example, that the purpose of children learning history at school was not just to gain an acquaintance with the past, but to learn about the complex operations of time itself.¹⁹ This may seem obvious, in the way that Kracauer's commitments to the study of time seemed obvious once they had formed in his consciousness: in retrospect. If geographers study space, we might assume, historians study time. Although rarely articulated with this directness, there is a certain elegance to this formulation. Myself, if pressed, I would simply suggest that the much disputed object of historical thought is time. Or – and here the difficulties begin – historical time.

When previously writing about Braudel and time I have been at pains to show that his conceptual discovery – for that is how I think it – belonged to a larger intellectual movement, comprising new relativist paradigms in the natural and human sciences, and the new fictional narratives of high modernism (in other words, to the world of Cubism, montage, and so on.) My purpose was in part polemical. If theories of relativity unhinged positivist conceptions of time and space in the Newtonian redoubt of physics then, we might conclude from Braudel's reasoning, similar developments might prove to be possible in historiography. And if this were so, historians, rather than seeing in the cultural ferment of modernism, broadly conceived, an adversary which undermined the possibilities of historiographical reconstruction, might instead see an ally.²⁰ In turn, this was to suggest that rather than

¹⁷ Ibid., pp. 108, 110.

¹⁸ The questioner was Peter Burke: see his *The French Historical Revolution: the Annales School, 1929–89* (Cambridge: Polity Press, 1990), p. 39.

¹⁹ Fernand Braudel, 'By way of preface', in *A History of Civilizations* (New York, NY: Penguin, 1995; first published 1963) p. xxxii.

²⁰ Bill Schwarz, "'Already the past': memory and historical time', in Susannah Radstone and Katharine Hodgkin (eds), *Regimes of Memory* (London: Routledge, 2003).

continue worrying about the epistemological fallout from poststructuralism or postmodernism, historians might more fruitfully follow the tactic of returning to the moment of high modernism in order to recover new or forgotten possibilities for their discipline. In this encounter between history and modernism – or this encounter-to-be – the question of historical time looms large.

In making this argument, I emphasized the importance of the narratives of high modernist fiction. If time, as Braudel proposed, really was multiple rather than singular, and if different dimensions of time moved with different velocities, then it seemed to me that in order to capture the complexities of such histories their narrative reconstruction would need to be commensurately complex. In this, the fiction of high modernism provided a kind of model. Although I still think this basic argument is right, I also now wonder whether this is not too baldly formalist, and whether the Barthesian qualification had not slipped from sight. But even with these qualifications, it seems plain that I could equally well – or maybe better – have referred not to modernist fiction but to the cinema. For surely cinematic time offers exactly the narrative possibilities Braudel's ideas call for?

Maybe so. But Braudel himself was not accustomed to thinking in these terms. His own resolution to the problem of differential time has been well rehearsed. In his most famous book, *The Mediterranean and the Mediterranean World at the Time of Philip II*, written over half a century ago, he identifies three overarching historical times: geographical or environmental time, which moved with glacial speed; the time of social structures – of economic systems, states, societies and civilizations; and the time of events, which he believed to be often the most exciting but in which he, as a historian, was least interested.²¹ These he summarized as geographical, social and individual times, recognizing that his hopes for rendering a total history depended upon understanding the superimposition of these variant movements of time. The remainder of his long professional life was devoted to the attempt to refine a historiography which could encompass the interconnections of these different historical times.

Braudel never made it clear whether he believed these historical times were those of the particular study in hand (the Mediterranean in the sixteenth century) or whether they had greater universal significance. It is clear, though, that Braudel experienced great conceptual difficulties with his categorization of the time of events. Here was a temporality which he found theoretically to be 'a dangerous world', composed of 'spells and enchantments' which the historian needed to 'exorcise'. For all his professional life he prevailed upon professional historians to avoid the troubling phenomena of events, or what he sometimes termed individual time, and to pay due attention to the quieter, more profound and ultimately more meaningful rhythms of the long duration.²² In thinking in these terms Braudel sought to provide a strict delineation of *historical* time. Individual time, or the time of

²¹ This is spelled out in Fernand Braudel, *The Mediterranean and the Mediterranean World at the Time of Philip II, Volume I* (London: Collins, 1972), pp. 17–22. The original Preface is dated May 1946.

²² See Schwarz, "Already the past", for the full argument.

events, barely qualified for him as properly historical. The duration of events was simply too fickle and intangible to be deemed historical.

These are important arguments which have no easy resolutions. But (as they stand) they are also too rectilinear, imposing too tight a delineation on what is most vital in the historical imagination: time itself. What kind of history is it that can exclude from its purview the time of events, subjective time, mediated time? It is interesting to ask what it is about mediated time that proves so troubling to the historian. Is media time deemed just too fragmentary (one tenth of a second!), insubstantial, phantasmagoric? Or just too ... mediated?

Neither Braudel's history of the Mediterranean, nor the rest of his wide-ranging historical corpus, has anything to say about the mass-media systems of the twentieth century. Yet we know the conditions in which he wrote *The Mediterranean*, and we know something of the situation which inspired him to write it. Like many compatriots of his generation, Braudel was broken by the fall of France in May 1940, an indubitably historical event the anguish of which he indubitably internalized. He was himself captured and spent the war interned as a prisoner of war at Lübeck. During this terrible time (a time which, for Braudel, must have moved with a glacial, painful slowness) he consoled himself with the thought that, defeat notwithstanding, 'the real France, the France held in reserve, *la France profonde*, remained behind us. It would survive. It did survive.' As a captive, he began to draft his great history. *The Mediterranean* was, he said, 'a direct existential response to the tragic times I was passing through. All those occurrences which poured in upon us from the radio and the newspapers of our enemies, or even the news from London which our clandestine receivers gave us – I had to outdistance, reject, deny them. Down with occurrences, especially vexing ones! I had to believe that history, destiny, was written at a more profound level'.²³ This carries Braudel's characteristic self-deprecation. But it conforms too to his theoretical ruminations: not only the contingency of the event, but the contingencies of their mediations, are here disavowed. Historical time, it seems, has many enemies. Subjective time, certainly. But also media times: the times of the radio and the newspaper.

This disavowal is typical of much historical thinking from historians, embracing a reluctance to think about the consequence of media forms *as mediated*. Maximally, this derives from the conviction that mediated time threatens to destabilize the very foundations of historical interrogation; minimally, it derives from a recognition, endorsed by Kracauer and Benjamin amongst others, that mediated times transform historical times. In part, this is an argument about modernity itself, or about modernity and time. The recurrent foreboding that modern life has broken all attachment to its pasts runs deep – in modern times as much as in postmodern times. How this basic theme is played out in theoretical discussion is confusing: the same presentiment can be ascribed to there being too much memory, or too little; to there being

²³ Quoted in Richard Mayne, 'Introduction', in Braudel, *A History of Civilizations*, p. xv.

too much history, or too little; to there being memory rather than history; or history rather than memory. Whatever the take, though, the problem has a common provenance: the difficulties which prevent modern subjects from connecting with their past in such a way that 'life' itself (in Nietzsche's terms) is enhanced, not diminished.

Empirical counterarguments, which demonstrate the capacity inscribed in the mass media for creating an archive of collective memory, in all its distinctive, modern co-ordinates, are still relatively rare. The tenor of much academic discussion still seems driven by a catch-all notion that the contemporary media induce a social forgetfulness which embraces both subjective memory and historical time. Nowhere is this more true than in comment on television.

I have not yet mentioned television, and this, too, may be symptomatic. Television presents particular difficulties for thinking about historical time. While we may recall many films which fire the historical imagination, or many written histories which can be construed as cinematic, television occupies a different order of cognitive possibility. Even at the most rudimentary level, it is common to hear historians complain that television cannot 'do' history – and Simon Schama is pilloried to prove the point. While cinema may have gained a certain legitimacy, television largely remains absent from the conventional intellectual imagination of historians, as historians. If social and political historians in Britain have been slow to use radio as a source, some seventy years after its first transmission I cannot think of a *single* instance in which television has been employed. Given the degree to which, in the second half of the twentieth century, television has worked to organize 'publicness' and simultaneously to colonize everyday life, this may seem bizarre.

I do not wish to underestimate the seriousness of the problems of conceptualizing television in terms of historical time, nor even in terms of the mnemonic. Television can indeed project a perpetual present; much programming gives the impression that forgetfulness is a principal justification (which may or may not be a bad thing); and contemporary viewing practices certainly seem to abet a mode of spectatorship of such heightened distraction that even old-style television flow has become disrupted. How, in such a situation, can projections of historical time, or the lived experiences of historical time, be anything other than scrambled?

If this is so, does television represent another dangerous world, full of malevolent spells and seductive enchantments, in need of exorcism? Television may have its dangers – as do books and paintings and films. But it is a product of human invention and, in late modernity, a principal organizer of human time. The least we can do is to try to understand its workings. If, in order to reach the formations of memory, classic theories of historical time need to be revised, by analogy we can say the same about contemporary media times. After all, memory itself is also notable for scrambling historical time. Rather

than jettisoning this domain of the symbolic from our investigations, we – historians as well as media specialists – should be rethinking the theories themselves, so that they can properly become an inspiration ‘for life’.

24 Very interesting in this respect is Janet Thumim (ed.), *Small Screens, Big Ideas: Television in the 1950s* (London: IB Tauris, 2001).

There are many possible approaches.²⁴ I shall refer to one only – and it will be immediately clear that this is not entirely an innocent choice. Returning to the recurring question of form ('What actually is television?'), John Ellis introduces the concept of working-through:

television can be seen as a vast mechanism for processing raw data of news reality into more narrativized, explained forms. This can be likened to the process of 'working-through' described by psychoanalysis, a process whereby material is not so much processed into a finished product as continually worried over until it is exhausted. Television attempts to define, tries out explanations, creates narratives, talks over, makes intelligible, tries to marginalize, harnesses speculation, tries to make fit and, very occasionally, anthathematizes.

'Television', he continues, 'does not provide any overall explanation; nor does it necessarily ignore or trivialize. Television itself, just like its soap operas, comes to no conclusions. Its process of working-through is more complex and inconclusive than that.' This process of working-through touches many aspects of television genre, involving 'chat, soap, documentary and, relatively rarely, the devices of the fiction movie' as well as news. Indeed, the divide between 'news' and 'chat' is continually weakening:

The chat arena constitutes a continual process of speculation on human behaviour and motives. Everything that was news will pass through this process in some way or another; connections are made between discrete and separate news items. Stories from the news arena are misremembered and misinterpreted, bringing forward the subterranean preoccupations of the individual speaker or of segments of the audience. This definition of chat, of course, is not confined to television; it is a fact of the whole audiovisual sphere and encompasses the activity of newspaper-columnists as well.²⁵

25 'Television as working-through', in Jostein Gripsrud (ed.), *Television and Common Knowledge* (London: Routledge, 1999), pp. 55–7.

The purpose of Ellis's short essay is to show that working-through is a process which underwrites many different aspects of television, present not only in news and chat, but in less expected segments of the television world, such as sport. This capacity to work through, he insists, represents a valuable moment in contemporary public life – a process, he implies, 'necessary for civilized life to remain possible'.²⁶

Aside from one or two passing comments, there is little in Ellis's essay explicitly about time. Television appears here as one vast, mutating and necessarily open-ended arena of discussion. Ellis chooses to give this a positive reading. Drawing from the same essay of Freud's, however, on which he bases his account, it would be equally

26 *Ibid.*, p. 58.

²⁷ 'Remembering, repeating and working-through', in *The Complete Psychological Works of Sigmund Freud, Volume XII* (London: Hogarth Press, 1958).

convincing to offer a negative reading and to suggest that television represents not openness but pathological repetition: 'acting out', in Freud's terms, rather than 'working-through'.²⁷ But the conclusions to be drawn (good or bad) interest me less than the terms of the argument itself. The category of working-through comes from Freud's paper on 'Remembering' and is closely connected, in Freud's arguments, to the virtues of memory – of remembering 'well'. Ellis's description of television consciously echoes Freud on memory: misremembering, misinterpreting, the continual collapsing of narratives, narratives located in 'the wrong' place, strange displacements, the merging of stories, repetitions. This is a complex, overdetermined process in which the objective is to seek some kind of provisional order in the face of perpetual irresolution and chaos. Ellis is not suggesting that television creates a social archive of collective memory; he is proposing a different, more dynamic, model in which television is a relation, or process, which functions rather like subjective memory. If this is so, television time may indeed be scrambled: but it is neither indeterminate nor does it function outside historical time. Just like memory, it is a critical constituent of our temporal world.

The themes I have discussed here are meta themes, and limited by that. I am conscious that I have had to use terms – media times, historical times – which are not only unduly mechanistic, but which are also only workable as separable entities within overly formal, abstract thought. Yet modern societies produce the past. The relations between the past and the present are in constant transformation. The past itself can only be known in the present through its manifold representations – representations which in the contemporary world are profoundly, irretrievably, mediated. Historical time, which allows us to think about past and present, is ever more mediated. The boundary between the actual and the imaginary cannot be drawn with any finality. Fictional time, or media time, seeps into historical time, shaping it at every moment, and administering the presence of the past within the present.

All five essays in this special issue are based on presentations given at 'Media Times/Historical Times', a colloquium hosted by the Department of Media and Communications, Goldsmiths University of London in April 2003. Other contributors to the colloquium were Sally Alexander, Victor Burgin, Geoffrey Nowell-Smith and Gillian Swanson.

Heterotopia, heterochronia: place and time in cinema memory

ANNETTE KUHN

1 Cinema Culture in 1930s Britain (hereafter CCINTB), ESRC Project R000235385. See also Annette Kuhn, *An Everyday Magic: Cinema and Cultural Memory* (London: IB Tauris, 2002); published in the USA as *Dreaming of Fred and Ginger* (New York, NY: New York University Press, 2002). For a complete listing of the project's outputs, see REGARD: an ESRC Research Service, <http://www.regard.ac.uk/regard/home/index> [accessed 3 November 2003], and search under the project number.

2 Geoffrey Nowell-Smith, 'On history and the cinema', *Screen*, vol. 31, no. 2 (1990), pp. 160–71. See also Susannah Radstone and Katharine Hodgkin (eds), 'Introduction', in *Regimes of Memory* (London: Routledge, 2003), p. 15; and essays in that volume by Bill Schwarz and Karl Figlio.

3 CCINTB T95–153, Beatrice Cooper, interviewed Harrow, 27 November 1995. All CCINTB quotations are from the testimonies of 1930s filmgoers who took part in the project.

4 Annette Kuhn, 'A journey through memory', in Susannah Radstone (ed.), *Memory and Methodology* (London: Berg, 2000), pp. 179–96.

This essay draws on some findings from a large-scale historical/ethnographic study of the reception and consumption of cinema in Britain during the 1930s which I have been working on for some years.¹ Since the project involved, among other things, depth interviews with surviving 1930s cinemagoers, it is also a study of cultural memory; and here I shall explore some of the distinctive features of cinema memory as a subtype of cultural memory, and look at how time figures in cinema memory. I would contend that the issues which arise from this particular inductive exercise have a wide historical, cultural and even conceptual resonance, in particular with regard to our understanding of *lived* time, the time of inner life: a time (and this is important) lived collectively as much as individually, a time somewhat incongruent with the linear temporality of historical time. In this sense, I am in the territory of Geoffrey Nowell-Smith's 'history of subjectivities',² though my path diverges somewhat from his.

Cinema was a real thrill in those days. . . . Talking about it I can almost feel how I felt. Yeah. Yeah. Mm. It was wonderful.

Beatrice Cooper³

The contents and the registers of memory talk are always informed by the contexts of remembering,⁴ and for members of the 1930s generation like Beatrice Cooper, life stage is a significant component of the storytelling context.

As a generation enters old age, its members will try to fashion meaningful stories from their individual and collective lives, assessing their roles as protagonists in their own life stories and proposing fitting

closures to these stories. There is often a sense of urgency in the telling. It feels important, perhaps, that these stories be passed on, put on the record, for future generations; there is a hope that one's story might have some lasting value in the world. Often, too, the stories themselves have an elegaic quality: they are a summing up of a life; they deliver a verdict ('It was wonderful'), a farewell. Elegy can sometimes embody a transcendence of its own, as if a particular life story stretches towards a meaning above and beyond the individuality of its narrator.

⁵ The reference is to the title of Henry James Forman's digest of the 1930s Payne Fund studies of the US cinema audience, *Our Movie-Made Children* (New York, NY: MacMillan, 1933).

Cinema holds a special place in the life stories of the 'movie-made'⁵ generation of the 1930s. For a few it even figures as a central protagonist, the focus of a quest for meaning in life. For the majority, though, the men and women for whom going to the pictures is remembered as a routine, taken-for-granted part of daily life, memories of cinemagoing are attached above all to memories of the places and the people of youth. These memories are at once pleasurable in the recollection and tinged with feelings of loss. Stories of queues and crowds outside cinemas, of galloping home after watching cowboy films at Saturday matinees, of dancing like Fred Astaire, are testimonies, too, to the losses that come with ageing: loss of the loved ones of childhood and youth, loss of a sense of belonging to a neighbourhood or a peer group, loss of health, energy and physical prowess.

Is there anything distinctive about the memories of the men and women who grew up with cinema in the 1930s? What is the essence of cinema memory for this generation? What would this tell us about the relationship between cinema memory and cultural memory? From the many and varied expressions of cinema memory that emerge from the testimonies of 1930s cinemagoers, two broad categories of memory emerge. These I shall call *cinema in the world* and *the world in the cinema*.

Cinema in the world describes what 1930s cinemagoers recall about the role the pictures played in their own lives at the time, in the worlds of family, friends and neighbourhood and of the routines of school, work and leisure time. These memories are marked above all by an insistence on *place*; or rather on very particular places, the places of earliest memory. For this generation, the places of earliest memory are exactly the places of the first experiences of cinema.

Cinemagoers of the 1930s also operate a strong category distinction between the unassuming, cheap, familiar picture houses of their childhood neighbourhoods and the exotic, luxurious, new supercinemas invariably remembered as being much further away from home. In memory, the familiar picture houses figure as extensions of home, as very ordinary and taken-for-granted features of the everyday landscape.

They are places to go back to again and again. Supercinemas, on the other hand, are associated with memories of out-of-the-ordinary treats, special occasions and, above all, with courtship.

All cinemas, though, whether ordinary or special, figure in memory as nodal points, centres of attraction and energy, people magnets dotted across memory-maps of the landscapes of youth. Crowds are always thronging around these places, and you always have to queue to get in. Inside, everybody is smoking, regular patrons make a beeline for their favourite seats, and there is constant hubbub as people continually come and go. Mothers bring along infants in arms, children are unruly, usherettes struggle to keep order, commissioners wield disinfectant sprays, and couples snog in the back row, spied on by small boys. Even the most ordinary picture house is associated in memory with plenty and generosity: being treated to sweets by a parent, getting free fruit and comics at the matinee, being given a box of chocolates on a first date, sitting through the programme two or three times over for the price of a single ticket. This picture of energy and abundance may offer a clue to what lies behind the feeling of a compulsion to return that surfaces in so many memory-stories, an understanding of what it was that drew people to the cinema and made them keep going back.

And yet memories of superabundance also contain their very opposite; for an equally insistent feature of cinema memory is stories about obstacles to getting to the pictures. Constraint and limitation of one kind or another figure prominently in the memories of this generation. In the context of cinema memory this *topos* takes the form mainly of accounts of the trials and tribulations undergone to obtain the cash to pay for a ticket to the pictures; and also, to a lesser extent, of stories of prohibitions such as familial or official vetoes on cinemagoing in general or on certain films or sorts of films. As in all storytelling, though, obstacles are there to be overcome; and there are many accounts of ingenious, devious – and in these narrators' versions invariably successful – ruses for circumventing all the difficulties and getting into the cinema.

Such strategies for getting by (or 'making do')⁶ also figure in other memories of youthful picturegoing: in recollections of collectively pushing at the limits of acceptable behaviour at rowdy matinees, for instance, or of taking time during the school day or during working hours to try out hairstyles and makeup seen in films – or even to bunk off to the pictures. All these memories share a sense of anarchy, subversion and rebellion against the often baffling constraints imposed by the adult world. In essence, they are stories about individuation, about exploring the world outside home and family. They are about becoming a separate person, about asserting a measure of independence, using the safe 'transitional' space of the local picture house to do so.⁷ They also embody a past versus present *topos*: told as they are from the vantage point of old age, these are stories about rising above hardship and finding ways of enjoying life in harsher times.

6 Michel de Certeau, *The Practice of Everyday Life*, trans. Steven Randall (Berkeley, CA: University of California Press, 1984), ch. 3.

7 Annette Kuhn, 'Spatial practices: some thoughts on cinema memory and its future', 'Cinema: Dead or Alive?', Screen Studies Symposium, University of London, 14 February 2003.

They are stories, too, about *time*: the time of cinema in the world is remembered above all in terms of the temporality of repetition and routine in everyday life, of the ‘cinemagoing habit’, the twice- or thrice-weekly visit to the pictures as it slotted into one’s other ordinary activities.

The temporality of cinema in the world conjoins the temporality of *the world in the cinema*; and at the point where the two meet, cinema becomes, in Foucault’s sense of the term, a *heterotopia*: ‘a sort of place that lies outside all places and yet is actually localizable’.⁸

The world in the cinema is commonly remembered as (to use a turn of phrase that comes up again and again in informants’ testimonies) ‘another world’. In memory, this other place emerges as at once radically different from the ordinary and at the same time also ‘localizable’ – embedded in the everyday. In the remembered world in the cinema, time too possesses something of this mix of the ‘localizable’ and the ‘outside’ that characterizes the Foucauldian heterotopia.

And of course . . . got people from humdrum life and you know . . . that’s TWO HOURS OF FREEDOM.

Arthur Orrell⁹

Many 1930s cinemagoers recall the experience of being in the cinema very much as a circumscribed licence, a type of liberty whose built-in limits are, in retrospect at least, recognized, accepted and even delighted in. In the ‘two hours of freedom’ afforded by a visit to the pictures, the time limit is just as important as the freedom itself. Implicitly or explicitly, the idea, or the sensation, of freedom characterizes recollections of the experience of time in the cinema. But this freedom is not remembered as limitless. Rather, it has the slightly paradoxical quality of being at once open-ended and circumscribed. To this extent – that it is both outside normal time and embedded in it – this remembered cinema time may be understood, stretching Foucault, as a *heterochronia*.

But if the temporalities of cinema in the world and of the world in the cinema are conjoined, the one embodies an order of time radically different from that of the other. In memory, time in the cinema comes across as flexible and/or as cyclical: if ‘two hours’ represents clock time, the structured and bounded time frame of the outside world, then inside the cinema that slice of time seems to assume a shape all its own.

Their first encounter with continuous programming¹⁰ in cinemas is remembered very vividly by most 1930s cinemagoers; in part, undoubtedly, because of the peculiar delights of the experience of time that it brought about:

⁸ Michel Foucault, ‘Other spaces: the principles of heterotopia’, *Lotus*, nos 48–49 (1986), p. 12. On the heterotopian qualities of cinema in the 1930s, see Kuhn, *An Everyday Magic*, chs 6 and 7.

⁹ CCINTB T95–50, Arthur Orrell, interviewed Manchester, 9 June 1995.

¹⁰ A practice of exhibition in which screenings ran on from one another, with no separate sittings. Audience members could enter the auditorium at any time during the show and stay as long as they wished.

¹¹ CCINTB T95–144, Phyllis Bennett, interviewed Norfolk, 17 November 1995.

¹² CCINTB T95–91, Eileen and Joe Barnett, interviewed Harrow, 18 July 1995.

You could sit in and see it three times round if you wanted. . . . If that was a picture I liked, you know . . . I'd say, oh, I'll see some more of that.

Phyllis Bennett¹¹

You just went in anytime. It could've been halfway through or whatever. And then you sort of sat through the programme and then waited to see the bit that you'd missed.

Eileen Barnett¹²

Continuous programming promotes a relation to the fiction feature film's organization of narration and of narrative time which goes against the grain of the linearity that characterizes both clock time and the order of temporality commonly attributed to the classical Hollywood narrative. Since it was not at all unusual, for example, to begin watching a feature film part way through the story, it was a common facet of the cinemagoing experience from the 1930s through until the late 1950s to see the end of a film before seeing its beginning. This mode of spectatorship certainly challenges the concept of the self-contained linear narrative with a beginning, a middle and an end, experienced in that order.

With continuous programming, narrative time and narrative closure are modified; and narrative time and viewing time are potentially thrown out of alignment. This, in combination with the opportunity afforded by continuous programming to stay in the cinema for hours on end, watching the same programme several times over, imbues recollections of cinema time with a quality of expansiveness and circularity. And yet cinema time is always remembered within the frame of the temporality of the outside world, a temporality which would always eventually reassert itself. One informant tells an amusing story about her earliest visit to the pictures, in which she learned the difference between time in the cinema and time outside:

[I] must have been about nine and I was told I could go and it was *The Four Sons* [laughs]. And . . . I was allowed to go to the first showing at 2 o'clock. And I went with a friend to the first showing and in these days you just sat right on. There was no change of, no going out. You just went any, in the middle, or any time you walked in if you paid your fare. So at the end of that my friend said 'I have to go, Helen'. And it just, as I say, went on again. I said 'I think I'll watch it again'. So I sat on and watched it again and I got out, got up to come out and was passing a friend with her parents and she said "Aw, come on, sit beside me. Don't go out, Helen. Just sit with me" [laughs]. So I sat through it again! And as the end of it her parents were going and she said to her parents, 'Could I sit through this again?' and they said 'Well, if Helen'll stay' [laughs]. I sat through the film four times [laughing]. . . . And when I got out, my father was waiting, absolutely in a terrible state and didn't know what had

happened to me. They'd gone round all my friends and looking for me. . . . And my dad was, he was so glad to see me [laughs] he couldn't make up his mind whether to murder me or welcome me. So, my mum welcomed me home but said 'If you ever do that again, you'll never get back to the cinema again!' [laughs].

Helen Smeaton¹³

13 CCINTB T95-2, Helen Smeaton, interviewed Glasgow, 23 January 1995.

In the testimonies of 1930s cinemagoers, cinema time is precisely a heterochronia: recollected experiences of it derive their quality, their texture, from its very difference from the time of the world outside.

Collisions between the two orders of temporality – of cinema in the world and the world in the cinema – feature prominently in cinema memory. This is true above all, perhaps, of memories of film serials – and more specifically of 'cliffhangers'. In fact, the cliffhangers which closed episodes of serials are almost excessively present in cinema memory. The dreaded caption

TO BE CONTINUED . . .

appears to be branded on many 1930s cinemagoers' memories, precisely no doubt because of the shock of the collision it delivered between the time of the world in the cinema and the time of cinema in the world:

Cos you had to go, you see. Cos they had a serial on. . . . And it got to an exciting part and that went off until next week. So of course you had to go.

Phyllis Bennett¹⁴

14 CCINTB T95-127, Phyllis Bennett, interviewed Norfolk, 27 November 1995.

Recollected experiences of a sense of incompleteness, of the painful and frustrating realization that there was a whole week to wait for the cliffhanger's *dénouement*, are key features of accounts of cinema in the world for this generation. Besides being about the collision between two kinds of experience of time, these memories are about the place of picturegoing in a weekly routine, about the habit – indeed the necessity – of going to the pictures regularly and repeatedly. For, in essence, talk of 'cliffhangers' puts into words the very experience of a compulsion to repeat: 'you *had* to go, you see'.

That meant we had to go to the cinema thirteen weeks in succession. But you know, it couldn't come quick enough.

Thomas McGoran¹⁵

15 CCINTB T94-14, Thomas McGoran, interviewed Glasgow, 30 November 1994.

In cinema memory, the heterotopia and heterochronia that characterize the world in the cinema engage the body and the senses in particular ways. The warmth of the auditorium and the upholstered comfort of the seat lull the body, easing it into sensuousness and a voluptuous sense of a time with loosened bounds. And these remembered experiences of body and temporality appear to be of a piece with certain engagements with a further dimension of the world in the cinema – the world on the cinema screen itself.

1930s cinemagoers' earliest encounters with the world on the screen are often remembered as strange, even terrifying. This is perhaps because ways of negotiating the transition between cinema in the world and the world in the cinema had yet to be learned. But if the world in the cinema soon became readable, and so lost some of its strangeness, it continued to be experienced as bigger, more perfect, more magical, than the world of daily life outside. Memories of being 'carried away', of feeling oneself becoming part of the world on the screen; memories of merging with the world in the cinema, even of experiencing a temporary ecstasy, a loss of self sometimes expressed in terms similar to that of the rapture of being in love, may certainly be understood in this light.

These tropes of cinema memory – the insistence on the *places* of cinema in the world, and the conjunction of, and the collision between, everyday time and place and cinema's times and places – assume expression in distinctive registers of memory discourse. Most strikingly, perhaps, memories of the earliest visits to the cinema often have about them a quality of the mythic or the legendary. In the recurrence and precision with which the landscapes of early cinemagoing are laid out in memory talk, for instance, or in the often formulaic character of stories about repeated *Odyssey*-like journeys from home to picture house and (crucially) back again, a collective imagination appears to be at work. These memory-stories, experienced and presented as personal, are tapping into a vein of shared, cultural memory.¹⁶

For example, stories so repeatedly told about jam jars substituting for pocket money, about anarchy ruling in the child's domain of the matinee, about vivid nightmarish visions inspired by scenes in films, may well be anchored in a particular time and place for their narrators,¹⁷ yet in their essentials they have much in common with childhood experiences across the generations. At some level these stories are about the challenges that face every child as it grows up: of becoming a separate person, of testing the waters of the world outside home and family, of coming to terms with the fears and the prohibitions surrounding any venture into the unknown.

Also peculiar to cinema memory is a certain inscription of the body; for example, in stories involving recollections, and even relivings, of bodily sensations and movements. Stories of movement: walking to the cinema, cowering under the seat, dancing along the pavement after seeing a Fred and Ginger film. Stories of sensation: the smell of disinfectant pervading the local 'fleapit'; the imagined feel against the skin of the beautiful clothes worn by film stars, perhaps, or the remembered sensation of wearing a much-loved garment of one's own that was copied from, or inspired by, the pictures; a glimpse on the

¹⁶ On this question, see Alessandro Portelli, 'The massacre at the Fosse Ardeatine: history, myth, ritual and symbol', in Katharine Hodgkin and Susannah Radstone (eds), *Contested Pasts: the Politics of Memory* (London: Routledge, 2003), pp. 29–41.

¹⁷ For details, see Kuhn, *An Everyday Magic*, chs 3 and 4.

cinema screen of a briefly exposed leg or shoulder; even the regressive pleasures of feeling oneself cradled in darkness in the depths of a cinema seat.

In these memory stories, narration itself sometimes assumes an embodied character. An interviewee's particular choice of words, or a manner of speaking, perhaps, will suggest movement or sensation. Or the telling itself may be somatized, expressed through the narrator's body in a smoothing of the hair, say, or a hand gesture denoting a gallop, or even in a few dance steps or bars of a song. It is as if the memory inhabits the body and can be relived, retold, without recourse to words; or indeed as if the world in the cinema could, still can be, carried into cinema in the world via the body. For the 1930s generation, cinema supplies both the contents and the forms of such embodied remembering. Memories both of the world in the cinema and of cinema in the world engage the body and the senses. And yet at the same time embodied modes of remembering exceed cinema and cinema memory, assuming a far wider purchase within cultural memory.

The place where memories of cinema in the world and memories of the world in cinema meet provides a useful point of departure for inquiry into the particular meanings of cinemagoing for the 1930s generation, and more generally for a quest for insight into the relationship between cinema memory and cultural memory in their organization of place, time and the body. So, memories of the earliest visits to the cinema, of the seductions of the continuous programme and, above all perhaps, of the 'cliffhangers' of film serials, reveal a great deal about how the experience of time inside and outside the cinema structures the experience of time in the collective memory of the movie-made generation.

And the world in the cinema of magnitude, abundance and perfection also has its equivalent in the remembered world outside: diffuse yearnings for the 'lovely' world on the cinema screen, for example, hook into both a general desire for life somehow to be better and into more grounded, gender- or class-specific wishes that opportunities (to be smarter, better-educated, richer, or whatever) had been more plentiful in those days.

In memory talk, these contrasts and contradictions happily coexist, sometimes embracing, containing, completing one another; so that in the meeting between the world in the cinema and cinema in the world, the dreams, desires and wishes become *domesticated*. There is a kind of assimilation of the magical, and a making magical of the everyday, which may very well be peculiar to cinema memory as a particular form of cultural memory. Cinemagoers of the 1930s claim that they understood perfectly well the difference between the world in the cinema on the one hand and cinema in the world on the other. And

although their testimonies make it clear that the pictures coloured their daily lives in all kinds of ways, the truth of that claim is not in the least vitiated by this fact. For the dreams, desires, emotions and behaviours engaged and inspired by cinema were rooted and lived in the very concrete, and local, times and places of cinemagoers' daily lives.

Taste and time on television

CHARLOTTE BRUNSDON

While scholarly television history remains a minority pursuit, broadcast television itself is increasingly displaying a slightly panicky self-cannibalism as it recycles fragments of old programmes in frequently opportunistic 'list television' compilations such as *Top Ten Screen Villains*/*Screen Bitches*, or *I Love the 1960s/the 1970s*, and so on. I want to use one of these programmes to raise some issues about television history, and particularly, if not very explicitly, about periodization and how we look at what we find in the archive – where, as Carolyn Steedman recently observed, 'though the bundles may be mountainous, there isn't in fact very much there'.¹

To DIY For (Yorkshire Television, 10 September 2001) is an hour-long Channel 4 programme which uses contemporary interviews with a mixture of clips from post-World War II films, do-it-yourself programmes and advertisements to reflect on changing fashions in interior design. Conceived in the wake of the notable 1990s success of makeover and lifestyle television, the programme permits the reuse of audiovisual archive material in the context of Channel 4's reputation for popular social history; while the often irreverent contemporary commentary signals entertainment rather than history. Light though it is, a historical framework is clearly discernible, commencing with postwar reconstruction and the Festival of Britain and moving on through the elimination of the old in the processes of gentrification (taking out fireplaces and flat-panelling doors) to the registering of particular fashions such as psychedelic wallpaper and the prominence of particular colours (such as 1970s orange) or paint techniques (such as rag-rolling and sponging). Shifts in retailing practices are referenced, with Terence Conran's Habitat chain and the development of the DIY

¹ Carolyn Steedman, *Dust* (Manchester: Manchester University Press, 2001), p. 68.

- 2 *The Guardian*, 27 February 2003, headed its obituary of Bucknell, 'DIY hero to postwar women'.
- 3 A fifteen-minute programme shown at 6.25 pm.
- 4 In the thirty-nine programmes broadcast between 16 May 1962 and 27 February 1963, Bucknell converted a large Victorian house in Ealing, which the BBC had bought for the purpose, into flats.
- 5 Raphael Samuel, 'Retrofitting', in *Theatres of Memory* (London: Verso, 1994), p. 56.
- 6 *Ibid.*, p. 52.



Fig. 1



Fig. 2



Fig. 3

superstore seen to precede Thatcherism, while the experience of shopping at IKEA evokes both horror and admiration.

The paradox of the programme is the way in which it is simultaneously historical and ahistorical. This is most apparent in a sequence about a figure resonant in British interior design, Barry Bucknell.² Bucknell fronted extremely popular DIY programmes on British television in the early 1960s, and *To DIY For* includes extracts from *Do It Yourself* (BBC, 1961)³ and *Bucknell's House* (BBC, 1962–3).⁴ There is also a recent interview with Bucknell in which he comments that he now occasionally thought, 'Jeepers, you were pushing it a bit then' (figures 1–3).

Bucknell, whose family had a building and electrical business, was a respectable, skilled man willing to turn his hand to most jobs in the unremitting pursuit of modernity and convenience in the home. His first solo DIY television slot was in *About the Home* in 1956, in a decade which Raphael Samuel has characterized as dominated by 'an appetite for modernization',⁵ and in which 'home improvement was largely a matter of making surfaces seamless'.⁶ Bucknell is most strongly associated with the modernization of Victorian housing and particularly with the removal of fireplaces and the panelling of doors and baths. Strongly didactic, his programmes encouraged viewers to be radical in their approach to old property and to eliminate features such as coal fires, panelling and moulding which might create and harbour dirt – and the bad old days. Such was Bucknell's influence that one of the *To DIY For* interviewees uses his name as a verb, suggesting that his home, when first purchased, had been thoroughly 'Bucknelled', requiring its new owners to restore laboriously the now fashionable period features. Most others show easy contempt for Bucknell, secure in their *fin-de-siècle* knowledge that a warped old pine door is better than a painted hardboard-covered one, and a Victorian cast-iron fireplace preferable to a 1960s ceramic-tiled electric fire surround. Only one interviewee – Libby Norman, editor of *Beautiful Homes* – suggests that 'there was nothing wrong with Barry Bucknell', and sees his fall from grace as an issue of fashion rather than the triumph of a true aesthetic: 'If people like Victorian fireplaces now, fine, fair enough, but our parents didn't. Our parents wanted something where they didn't have to go out to get a coal scuttle just to get warm. They wanted electric – they wanted to just switch a switch and be warm.'

To DIY For is sufficiently intelligently conceived to grasp that there is an underlying issue about the nature of good and bad taste, and indeed near its conclusion shows a 1960s extract of Kenneth Clarke (figure 4), the mandarin presenter of the BBC's widely exported 1960s series *Civilization*, in a small domestic interior featuring flying ducks and an ormolu clock, discussing what bad taste is. However *To DIY For*'s structure, in which bad taste is repeatedly consigned to the past



Fig. 4



Fig. 5



Fig. 6

of ridiculous, unbelievable and hideous design efforts, works to secure the viewer's position as safely beyond these historical errors. People had done horrible things to their houses, but this bad taste, as the use of archive material confirms, is in the past. Clear efforts are made to present the contemporary commentators in contrasting styles of domestic environment ('Victorian', modern minimalist, modern funky baroque), but their judgements, and their repudiation of the taste errors of the past, are univocal (figures 5–6). And so although the programme draws strongly on historical archive material, the way this material is used functions generally to create two time zones: the past (horrid and humorous design mistakes) and the present, from where we can recognize such errors, but where, apparently, there is no chance of making equivalent time-bound choices. The issue of judgements of taste becomes transposed onto a past/present divide.

The ahistorical history of *To DIY For* is very similar to the mode of address that Lynn Spigel describes when she analyzes the recontextualizing strategies of Nick at Nite, a US cable company specializing, during primetime, in 'classic' television reruns. She suggests that Nick at Nite 'created a new reception context for old reruns by repackaging them through a camp sensibility', continuing:

- 7 Lynn Spigel, *Welcome to the Dreamhouse* (Durham, NC: Duke University Press, 2001), pp. 362–3.
- 8 Barbara Klinger, *Melodrama and Meaning: History, Culture and the Films of Douglas Sirk* (Bloomington, IN: Indiana University Press, 1994).
- 9 Ib Bondjørg, 'Oppbruddet fra monopolkulturen: En institusjons- og programhistorisk analyse av dansk tv', *Sekvens – Filmvidenskabelig Arbog* (1989), pp. 175–95, cited by David Morley in 'To boldly go . . .', in Pertti Alasutari (ed.), *Rethinking the Media Audience* (London: Sage, 1999), p. 199.



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11

such tongue-in-cheek programs and promotions speak to a young, television-literate generation by constructing a vision of the past that implicitly suggests the 'progress' of contemporary culture . . . the idea that the viewer is somehow more enlightened than the characters (and audiences) of the past is absolutely central to the interpretation the network solicits.⁷

The use of archive material in *To DIY For* can also be seen as an example of what Barbara Klinger (in her discussion of contemporary reactions to the films of Douglas Sirk) calls 'mass camp'.⁸ She describes this as an increasingly prevalent 'hit-and-run sensibility', selecting moments from historical artefacts that seem particularly anachronistic when viewed with the concerns, conventions and values of contemporary audiences.

Certainly, the skill of editing archive compilation programmes like *To DIY For* lies in the precise intuition of how much old footage is funny, and when to cut before it becomes boring. The editing structure of these programmes depends on extremely short bursts of 'old television', contained and embraced by contemporary commentary, so that the viewer is never far from the enlightened and modern present. The two-minute Barry Bucknell sequence in *To DIY For* uses extracts from both *Do It Yourself* (the credits of which are used to introduce the sequence) and *Bucknell's House* for sequences on fireplaces, panelling doors, and lining walls. But even these short extracts are split up so that Bucknell is sometimes reduced to a brief sound-and-vision bite, 'I'm going to talk about pelmets this week' (figures 7–11). There are seven archive extracts in the segment, punctuated with present-day interviews in which homeowners describe their struggle to undo 'Bucknellization'. Of the archive extracts, three have present-day ironic commentary overlaid. Thus Bucknell himself speaks only briefly to the present-day audience, in a manner which the contextualization renders minatory: 'If you've got an ugly old panelled door like this one . . .'. This editing strategy, which is characteristic of much 'list television', transforms the old, long time of what Ib Bondjørg has called 'schoolteachers' television'⁹ into the flashy, instantaneous meta-time of contemporary makeover television. It really does look as if Barry Bucknell nipped in with his toolbag and in seconds stripped the house of what are now valued as original features.

Here, I wish to explore some precursors of contemporary British lifestyle television, trying to navigate some of the ways in which it now seems funny, whilst retaining a sense of the history of this exploration. Notwithstanding those moments when I have exclaimed and laughed out loud in the quiet dark of the television archives while researching these programmes, there is more to learn about the history of taste-making on television, and indeed about the history of television as a domestic medium, than is evidenced by that first gasp of astonishment.

So in a way I am asking something about the sensibility with which we undertake television archive research: can we – and how can we – look historically at old television, particularly in non-mandarin genres? And if we do, what can we learn? If television itself is producing its own history as nostalgic mass camp, simultaneously reinscribing and refusing its historicity, what are television scholars producing?

Samuel concludes his discussion of ‘retrochic’ by warning:

Professional historians are poorly placed to condescend to retrochic since, whether we acknowledge it or not, it is one of the currencies in which we deal. We too put the past in quotation marks, as a way of marking our distance from it, and often as a way of extracting some quaint or comic effect. We too want to make our writing evocative. . . . In any event, our work is always an imaginative reconstruction of the past, never – for all the elaboration of our footnotage – mimesis.¹⁰

¹⁰ Raphael Samuel, ‘Retrochic’, in *Theatres of Memory*, p. 114.

My account of the Bucknell sequence in *To DIY For* could itself be seen as this type of ‘footnotage’. So what? The programme makers did not acknowledge that they were using different bits from different programmes and chopping it all about. What is wrong with that? It makes for effective contemporary television, and still gives some sense of history. Can the television historian do better?

The formats of contemporary lifestyle programming owe much to game shows, but their broadcast history stretches back to a range of sparsely archived instructional, ‘how to’, and leisure radio and television programmes. I have looked at programmes from British television of the 1960s and 1970s from which viewers could learn a wide range of skills: upholstery, flower arranging, do-it-yourself, dressmaking, gardening, cooking, pottery and plumbing. Between them, four 1970s programmes – *The Craft of the Potter* (BBC2, 1976), *Planting For Pleasure* (Thames Television, 1973), *Old House, New Home* (Yorkshire Television, 1976) and *Furnishing on a Shoestring* (London Weekend Television, 1975) – give a sense of the different budgets, projects and modes of address of this television genre in this period. Three main areas of interest arise from detailed analysis of this ‘old television’.

Firstly, there are some formal changes in television presentation, which I have discussed elsewhere, in particular the increased use of the closeup and the move from a realist to a melodramatic mode.¹¹ Particularly striking to the contemporary viewer is the dependence on real time and minimal post-production; and I want to suggest that close examination of these 1970s programmes reveals something of the history of television temporality. If television is now postmodern, it was not always so, and just as the use of the closeup has changed, so too has television time.

¹¹ Charlotte Brunsdon, ‘Lifestyling Britain’, *International Journal of Cultural Studies*, vol. 6, no. 1 (2003), pp. 5–23.

Second, there is the development of the different skills, address and manners of ‘being on television’. While not engaging directly with their arguments, some of my discussion here should be seen as in dialogue with Andy Medhurst’s perceptive analysis of Gilbert Harding’s television celebrity and with Karen Lury’s suggestive reflections on television performance and ordinariness.¹² Thirdly, and relatedly, there is the issue of the performance of social class on television. This is intimately bound up with the charged issue of the class meanings of television as a medium. The early 1970s are interesting here, in that the much-vaunted class mobility of 1960s Britain had particular salience in relation to media careers (photography, journalism and television) in which both residual and emergent ideas of class belonging and identity were in circulation. In thinking of the class meanings of the medium, we can find strongly contrasted views and approaches. For example, Joan Bakewell’s and Nicholas Garnham’s 1970 collection of interviews with programme makers is called *The New Priesthood*,¹³ alluding to governance and offering a scholarly understanding of the new professions; while the playwright Peter Nicholls recently commented on the erection of television aerials (which were H-shaped) on roofs in the 1960s: ‘We used to say that the people who dropped their aitches put them upon their houses’.¹⁴ We can find both patrician and demotic presentation and modes of address in these programmes, just as there are older Reithian and newer commercial notions of the imperatives of broadcasting in this period. Instructional and leisure broadcasting is a rich site to examine this interplay because it brings together people with specialist knowledge in a context which requires skill-sharing and an address to a viewing public.

The Craft of the Potter, a five-part series from 1976, was broadcast at 7.05 pm on Mondays on BBC2 (the channel’s first programme of the evening after the Open University broadcasts which ran from 5.25 pm each weekday). Presented by the potter Michael Casson, each twenty-five-minute programme addresses different aspects of pottery, with the concluding programme, ‘Talking about pots’, organized as a discussion session on taste, judgement and quality in relation to pottery. As with other BBC2 programmes of the period, this one approaches design matters in a serious tone, using practitioners and experts to explain and enthuse about aspects of their craft. Each programme consists of a mixture of studio presentation and location-shot footage in which guest potters demonstrate their skills. Episode four (‘Glaze and Fire’, 3 May 1976), for example, has filmed sequences from outside Harrow College of Art and Technology demonstrating firing techniques. In a scene resembling a recreation of an Anglo-Saxon village, a wildly bearded Michael Casson speaks to an equally bearded Walter Keeler as they

¹² Andy Medhurst, ‘Every wart and pustule: Gilbert Harding and television stardom’, in John Corner (ed.), *Popular Television in Britain* (London: British Film Institute, 1991), pp. 60–74; Karen Lury, ‘Television performance: being, acting, corpusing’, *New Formations*, no. 26 (1995–6), pp. 114–27.

¹³ Joan Bakewell and Nicholas Garnham, *The New Priesthood* (London: Allen Lane, 1970).

¹⁴ Peter Nicholls, interviewed by Sue Lawley on *Desert Island Discs*, BBC Radio 4, 7 July 2000.

stand in the wind next to a huge external kiln built by Keeler. To the twenty-first-century viewer there is an innocence of presentation here: the two hairy potters clad in their working clothes enthusing, in long-shot, over the glowing-chimneyed kiln ('a design that has been used for centuries ... like all primitive technologies, it depends on the craftsman's intuition and skill'), with no attempt to condense their enthusiasm into a product that can be easily displayed. Their attention is on what they are explaining, not on their relationship with the camera.

The final programme of the series is a studio discussion in which each participant (Michael Cardew, Victor Magrie, Pan Henry and Jon Catleugh) nominates pots and potters whose work they think distinguished. The programme thus also includes film of Bernard Leach, Elizabeth Fritsch, Shoji Hamada and Nigerian potter Ladikwali. This is a carefully structured programme which, through the use of the filmed extracts and the studio closeups on particular pots, presents with some variety the key issues in the aesthetic evaluation of pottery, such as the role of function. Perhaps it is the case that crafts which aspire to art are well served by television. Perhaps it is precisely because their aesthetic status is less elevated that there can be no questions about 'betrayal' or 'vulgarization'. Certainly, here, the physicality of pottery and the clear temporal stages of its making – the potter's wheel evidently films well – offers interesting images in a variety of national contexts, and the international range of the potters and potteries featured confirms the serious aspirations of the programme.

This series has a clear mission to inform and educate which it embodies with some confidence. While not drawing attention to itself stylistically, it devotes considerable attention to detail. This is epitomized by the opening title (which, unusually, receives a credit at the end of the programme)¹⁵ in the form of a glazed plate with 'The Craft of the Potter' written on its border, a format also used for the episode titles. The circular title is not particularly easy to read, but it does assure the viewer that there is here something specially made: craft television as opposed to mass-produced television.

Craft television, in another sense, can also be seen in the 1973 Thames Television series, *Planting for Pleasure*. This programme addresses its viewers as people who might aspire to – and be able to spend time on – the creative aspects of homemaking and gardening. In this move beyond the utilitarian and functional, the programme to some extent anticipates the address of 1990s lifestyle shows. Jean Taylor introduces the first of the twelve episodes, declaring: 'Creating new and beautiful life is what gardening is all about, and having grown flowers and cut them to arrange them to make your home more beautiful is what flower arranging is all about. Two creative activities all men and women can enjoy.' The programme focuses each week on a type of

¹⁵ The programme had only four credits: title plate Mary Wondraush; gallery credits; director Anna Jackson; producer David Hargreaves.

¹⁶ Mainly Chris Brickell and Roy Hay at Wisley, a Royal Horticultural Society garden which continues to be used in gardening broadcasting.

¹⁷ *Planting For Pleasure*, 15 October 1973.

¹⁸ A useful comparison here would be the series *Dressmaker* (1976), shown first on BBC1 and then repeated on BBC2. Each twenty-five-minute programme concentrated on one or two basic operations, such as pinning and cutting a paper pattern.

plant (perennials, roses, evergreens, dahlias) or a type of operation (growing from seed, drying flowers) and includes outdoors instruction from a male gardener¹⁶ and indoor instruction on flower arranging from Taylor. *Planting for Pleasure*'s main set is a workshop conservatory – not unlike Delia Smith's 1990s kitchen conservatory – and four studio household locations that are, each week, improved by flower arrangements. These are 'a telephone table' in a darkly decorated hallway; a dining room – never shown – consisting of a table and sideboard in a light contemporary veneer; a mantelpiece; and, in the same more traditional drawing room decor, 'a niche', the site of the most splendid arrangements. Taylor was a proselytizer for both growing and arranging flowers, and in that world was a progressive, with a commitment to the use of unusual materials such as driftwood, seaweed and stones, unconventional vases (she liked using cookware: 'the best kinds of containers are the earthy colours, greys and greens and browns'),¹⁷ and an enthusiasm for naturalistic arrangements and 'landscapes' in which model butterflies and birds might be added to the moss-swathed flower container. The programme is cleverly conceived, in that the different gardening operations provide a discipline in which the various possibilities for arrangements in the regular spaces can be explored, while its commitment to an aesthetics of the everyday encourages and enables the viewer.

So, as with *The Craft of the Potter*, we have a well-organized programme, presented by an enthusiast, which aspires to generate a matching enthusiasm in its audience. *Planting for Pleasure*, however, is much more likely to provoke the mirth that afflicts the contributors on *To DIY For*. Cheaper than *The Craft of the Potter*, and in terms of its late-night scheduling alone clearly considered less significant, this is not mandarin television. In postwar Britain, flower arranging was both a significant cross-class feminine skill and an aspirational site. Debutantes learned how to do it, as did the readers of *Woman's Realm*. A bit like dressmaking and ballroom dancing, it was a mode of expressive creativity which nevertheless had strict rules. Unlike dressmaking, though – which has a substantial and extremely didactic television history¹⁸ – flower arranging does not really have a functional moment. With dressmaking, it is possible to separate procedures, such as making a buttonhole, from the type of garment, material and button with which one might make it. With flower arranging, while there are tips which can be shared – such as when to cut flowers, or how to prepare them – it is, from the beginning, a matter of taste as to whether or not the telephone table will be improved by a flower arrangement, and, indeed, as to what constitute suitable flowers for cutting and arranging in which combinations. The difficulty, for Jean Taylor and for later viewers such as myself, lies in the presentation of taste matters as functionally driven.

In discussing *The Craft of the Potter*, I suggested that television might be particularly congenial for crafts and skills not fully established as art. That is, the discursive antagonisms between television and the high arts – in which, for example, the adaptation of a novel is seen to betray the complexity of the original – does not operate in the same way in the filming of pottery, and there is much less inhibition in demonstrating the processes of making – the ‘how to’ – when no artists are involved. Certainly, television can also show flower arranging well, both in preparation and *in situ*, despite, as in this instance, the awkwardness of the one-camera studio operation, which means that at any one point either Taylor or the audience cannot see what she is doing. But there are still distinctions to be made. Taylor, the presenter of *Planting for Pleasure*, does not have the cultural authority of the BBC presenters and guests on *The Craft of the Potter*; nor, in western cultures, is flower arranging accorded much gravitas. Flower arranging could have been treated differently – with, say, film clips of flower arranging in Japan – but as it was, this is a series in which a great many aesthetic assumptions are disavowed in a straightforward ‘how to’ presentation.

The Craft of the Potter is made with the cultural confidence to foreground issues of aesthetic disagreement and varieties of practice. It is less ‘how to’ than ‘how to appreciate’. Despite her aspirations to modernity, neither Taylor, nor flower arranging, nor *Planting for Pleasure* has this cultural capital and confidence. Instead, Taylor condenses particular aesthetic views – where it is appropriate to place flowers, what containers should be used, that an arrangement should look natural, that it should have a focal point – into issues of competence and procedure. This disavowal is particularly receptive to a contemporary camp rereading – use these scissors, this jam jar which you have covered with khaki textured paint¹⁹ and produce this type of flower arrangement which you should place on a cake stand which you have disguised with one of your colour co-ordinated covers.²⁰ It is this naturalization of a historically specific aesthetic in combination with the lesser cultural kudos of flower arranging which makes *Planting for Pleasure* vulnerable to the ‘hit and run’ of mass camp.

Mike Smith presented a series of very successful DIY programmes for Yorkshire Television in the 1970s, *Old House, New Home*, which is set in an ordinary house in a northern town which Smith is going to renovate on television. Each episode focuses on one type of task – assembling and mounting kitchen units, installing central heating, making a new doorway – and the task is shown in real-time detail. The programme is shot with one camera and fades to black to demonstrate that time is passing. Occasionally, the demands of the task require a week’s work: ‘I’ve got a lot more units to do, so till the next time – see you then’ (26 June 1976). Reference to the time that tasks will take is a

¹⁹ *Planting for Pleasure*, ‘Flowers from seed’, 24 September 1973, featured jam jars painted with chalk board paint.

²⁰ *Planting For Pleasure*, ‘Dahlias’, 29 October 1973, featured different coloured slip-on covers for cake boards.

convenient linking device for the series, invoking both continuity and a sense of the whole project of the house modernization. But the insistence on real duration also enhances our belief and Smith's credibility. This is realist television in the sense that it proposes that Smith is really working on a pre-existing old terraced house in an identifiable location. Smith's trustworthiness as television presenter/instructor is dependent on a lack of gimmickry in his approach to each home improvement task, and also on a lack of gimmickry (post-production) at the formal level. Doing a job properly takes time, and that is exactly what the use of real time (fades to black and weekly episodes) guarantees. It might be slow, but it is true. This slow truth of tasks undertaken on the programme also points us to the way in which an equivalence is assumed between television time and viewers' time. Both Smith and the viewers exist in the same kind of time, a shared everyday ordinary time in which considerable care is devoted to the details of each task, with Smith careful to indicate at which points it is possible to customise, in his case for house owners Keith and Jill Lane. However, some tasks are proscribed for the amateur, such as the installation of a central heating flue – a proscription in which we see the imagination of the producers in action as Smith is filmed in the street with a huge coil of central heating flue leaping out to fill the frame once he unties it (15 May 1976). It is noticeable that this sequence – which is about what you must *not* do – is the only formally flamboyant one in the series. Any more of this type of visual excitement, I suggest, and Smith's trustworthy, can-do persona might be undermined.

Smith, like Bucknell before him, is a modernizer: transforming sculleries into dining kitchens, installing central heating and tongue-and-groove wall surfaces. He is also an excellent television presenter in a newer mould than Bucknell – casual, friendly and perfectly at ease with both the camera and his own expertise. Yorkshire Television can afford to make this programme – which was made with a regular, in-house, unionized production team – with so little spent on credits, camerawork and post-production because Smith can carry the image: he says hello or cheerio quite naturally, seemingly just interrupted in, or returning to, an absorbing task.

This skill of presenter ordinariness is now taken for granted; but the fact that it is a particular, historically specific, manner of broadcasting can be seen by contrasting Smith with one of his guests in *Jobs Around the House*.²¹ In the episode 'Worm and Rot' (4 March 1973), Smith introduces Mr Fred Hardman to show the viewers the horrors of wet and dry rot, woodworm and beetle. The programme is studio based, with Smith and Hardman standing behind a table loaded high, on the right, with different types of rotting timber. Clips from a film of a house badly affected by dry rot are shown, and the programme

21 *Jobs Around the House* (Yorkshire Television, 1973) precedes *Old House, New Home* in Smith's television career, but has a very similar look, design and presentation. On ordinariness, see Lury, 'Television performance', and also Jon Dovey, *Freakshow: First Person Media and Factual Television* (London: Pluto, 2000).

proceeds with Hardman picking up pieces of wood from the pile, showing the decay in closeup detail, and then placing the pieces in a new pile on the left of the table. Slowly the viewer grasps, as the pile of rotting wood on the right-hand side of the screen is, piece by piece, moved over to the left-hand side, that this will be the process of the programme, and that it will be only when we have seen all the different types of wood, rot and beetle damage and when the whole pile on the right has been moved over to the left, that the programme will finish. There is nothing else: the programme offers seventeen minutes on dry rot alone.

Fred Hardman is clearly an expert in his field and a man devoted to the elimination of worm and rot. As the programme proceeds, he reveals a dry turn of phrase, suggesting, for example, that death watch beetle should be seen as 'the glamour girl of the beetle world'. But in comparison to Smith, he seems to exemplify a form of pre-televisual personhood. Suited, slightly awkward, uncertain whether to look at Smith, the wood or the camera, he seems not ordinary but old-fashioned, more like somebody from silent movies than colour television. He says goodbye without looking up, while Smith can thank him, and look at us, and smile and say he'll see us next time. Just as Fred Hardman has offered us sections through pieces of wood, so the programme seems to offer us an archaeology of personhood on television, with Smith and Hardman from different eras, brought together over the shifting piles of rotting wood.

This archaeology of televisual personhood is also vividly apparent in *Furnishing on a Shoestring*, a series which gives a fascinating insight into some precursors of contemporary makeover shows and the shifting contours of the British class system. This London Weekend Television programme was first broadcast on Saturday mornings in early 1975 and was made in 1974 with the assistance of the London College of Furniture.²² Fronted by Judith Chalmers²³ and shot in one studio, the programme has all the hallmarks of relatively cheap television, though it is honoured with a full-page feature in the *TV Times*, which refers to 'the do-it-yourself adult education series'.²⁴ If Bucknell and Smith offer programmes of modernization, this is a programme of gentrification. The aim of the series is to 'give a new lease of life to old dilapidated furniture' by showing the furniture owners how to restore the selected pieces under the guidance of skilled craftspeople. The first episode introduces the format with four pieces of furniture (a desk, two chairs and a sofa) and the relevant owners and experts. Thereafter, each week demands the demonstration and assessment of progress, and further instruction. The climax is episode seven, when, as Chalmers announces, 'today we reach the deadline', and all the completed restorations are displayed and valued.

Elements of this format have endured: the display of transformation; the interplay of 'ordinary people', experts and presenter; the narrative introduced by the deadline; the final speaking of cash value. It is,

²² Broadcast on London Weekend Television from 1 February 1975 between 9.40 and 10.10 am. The furniture was exhibited at the London College of Furniture, mentioned in *TV Times* in week six of the series (15 March 1975).

²³ Chalmers was already a successful and well-known presenter in the 1970s. She was lead presenter for the ITV holiday show, *Wish You Were Here* at the time of *Furnishing on A Shoestring*.

²⁴ 'Judith Chalmers lives with her husband, Neil Durden-Smith, and two children, Emma and Mark, in a lovely old house in North London. But even this busy – and stable – professional woman is thinking about beating inflation by doing some do-it-yourself herself.' Merry Archard, 'The renovation game: it's the do-it-yourself way to sanity', *TV Times*, 15–21 February 1975, p. 11.

however, the way in which these elements are deployed that shows us how looking at old television can 'make strange' conventions and genres with which we are so familiar that they can no longer be seen. That is, making the present strange is perhaps more historically interesting than making the past funny. There is an *unheimlich* quality to pace and tone and relationships in these programmes which throws into relief what we now take for granted. Firstly, in relation to temporality, one must observe that seven weeks is, to the twenty-first-century eye, a very long time for a transformation. The pace is even and simply progressive. There are no flashbacks of any kind before the final episode – which simply displays 'before' photographs of each piece of furniture. The punters are taught how to perform the necessary operations from week to week, and we are given to understand that each week they have increased in skill and that the improvements we see are their own work. The programmes are presented with a double real time – the real time of presentation and demonstrating techniques, and a plausible real time for particular tasks to have been completed. Televisual time is here quite tightly tied to, and references, extradiegetic time.

As with Smith's series, this slow 1970s televisual time enables us to see how much more autonomous contemporary televisual time is. Contemporary makeover is almost instantaneous in comparison, its hooks to the real often limited to the beginning and end of the programme, when presenters, viewers and punters are brought together. Instead of viewers and presenters sharing the same time, and its passage, viewers are now offered, in the main part of the programmes, a very particular kind of time, one which curiously lacks duration. The signifiers of this type of time as a representation are present in devices such as speeded-up film and various types of graphics, but in effect complex and difficult skilled operations nowadays take no time at all. Life with the boring bits left in can be a bit of a shock. In a meeting of the Midlands Television Research Group, a novice decorator commented that she knew it would take more than ten minutes to decorate a room but was taken aback when it took more than two hours. Perhaps, then, we can suggest that looking at this old television tells us something about a changed balance of power between televisual time and real time in programme making: that we can begin to specify precisely the type of textual detail that might seem significant in differentiating between a realist and a postmodern era in television.

The social world of television is also quite different. The personnel, and the relationships between them, speak of quite different understandings of television, class and skill. If *The Craft of the Potter* is at moments reminiscent of a well-heeled dinner party, the social mix of *Furnishing on a Shoestring* is broader, more like a furniture auction animated by a relatively new character, the class-mobile television

presenter. In this programme the owners are all noticeably middle and upper-middle class, while the experts are respectable, skilled working class (and everyone is white). In the first episode, the two male furniture owners are dressed casually without jackets, one without a tie. One of the two female owners is wearing jeans while the other wears trousers. Judith Chalmers, looking a little like Robin Hood or Jack the Giant Killer, wears a skirt, sweater and tights all in the same shade of forest green. George Dixon the cabinet maker and Robert MacDonald the upholsterer, who share an end credit, wear dark three-piece suits. This is a world of gentlemen and players, a world in which the 'ordinary people' on television are noticeably posher than the experts. Later in the series, a couple of female experts (on chair-caning and soft furnishings) who slightly bridge the class chasm of the programme are introduced, but the dominant impression remains one of toffs getting down to a bit of elbow grease (a much-used phrase in the programme) under the instruction of tradesmen. This reaches its apotheosis in the final programme when Glyn, who has been restoring the desk which he 'inherited' when he 'bought a delicatessen near Portobello Road', raises an issue about the desirability of furniture renovation. For the final week Glyn has dressed up and is wearing a silk bow tie with his v-neck sweater. He observes that the main issue for him 'was almost a moral problem as I was doing it. Am I doing too much?' Here he articulates the dilemma of the gentrifier in the arms of the modernizer. While he wishes to restore the desk – and for this is dependent on the skills of Dixon, a master craftsman – he does not want to restore it too much. He does not want it to look as good as new – or fake.

The yawning class disparities on this programme are partly an effect of the 'adult education' aspects of the series: students have traditionally dressed down, and the instructors here are skilled master craftspeople, not dons. But although the furniture owners – 'the amateurs' – are assessed each week on how they have progressed, they are not in any other sense presented as students; they are involved in property purchase, running businesses and homes, bringing up children and giving dinner parties. Indeed, it is the tutors who are more evidently controlled by Chalmers in the constant tension between television timing and their expertise. For she, as the television professional, carries the burden of keeping to time in the face of detailed, unhurried instruction. More than once Chalmers interrupts instruction or explanation to move the programme on, most brutally in the first programme which she concludes by interrupting Dixon to say, 'Why don't you have a go at doing that, Hilary', then turning full face to the camera to conclude as the credits roll: 'Well as you can see there are lots and lots of things we've got to cope with'. Like Fred Hardman on *Jobs Around the House*, Dixon and McDonald represent an old type of expert, one who is in some ways pre-televisual. While the mediation of experts and ordinary people in television programmes has been well

documented in media scholarship, and while there were (and are) very clear professional codes about who can speak to camera, what is striking here is the way in which class distinction is staged and displayed. Chalmers, for example, is more at ease with the furniture owners than the tutors and is even, in the second episode, dressed almost identically to Glyn, both wearing trousers and sweaters with extravagant 1970s shirt collars displayed over the sweaters. This is a programme of gentrification, not modernization, because, in the teaching of craft skills to these bourgeois entrepreneurs, the programme stages the reclaiming of 'junk' – dilapidated furniture, inner-city housing – and its restoration.²⁵ It is not Mr Dixon and Mr McDonald who will be living in Islington in the future, even if they live there now; and this is signified partly through their lack of flexibility in televisual manner. They are, paradoxically, not modern enough.

²⁵ The north London inner-city borough of Islington, famous now as the haunt of New Labour and the home of Tony and Cherie Blair before the 1997 election, is perhaps the most resonant name in the list of areas gentrified since the 1960s.

Looking at this material, one is drawn to adjectives like 'innocent' and 'simple' to describe both aspects of the presentation and the programmes' projects. It is this, of course, which is most readable through the sensibility of mass camp. I have tried to show how this innocence and simplicity – which is indeed there – can reveal rather more diverse negotiations about taste and home improvement as well as the role of television within these. I have also suggested that it is useful to see television, even as late as the 1970s, as dominated by a realist aesthetic in the detail of its deployment of camera and temporality, an aesthetic which is particularly marked in this type of leisure programming. One of the paradoxes of television is that it was born as a realist medium in a world transformed by both modernism and modernity. Theories of postmodernity were seized on in the latter part of the twentieth century to explain both television and the world to which it contributed. Indeed television became one of the principal metaphors through which the postmodern was articulated: as in, for example, Andreas Huyssen's thoughtful discussion of the relation between television and the museum.²⁶ While there is a way in which the banality and ubiquity of television are metaphorically suggestive in relation to the postmodern, the unacknowledged casualty of this metaphor is television's historicity. The delight of looking at what is, after all, not very old television is that one can see the medium, in its different incarnations, using its realist repertoire to come to terms with a rapidly changing modern world. We can see the way in which existing cultural inheritances and skills can be both mobilized and transformed by the medium. New cultural competences such as television presenting jostle with older expertise to reveal something of the changing class configurations in a wider world. The postmodern chic of *To DIY For* does not do justice to all this, although it is funny

²⁶ Andreas Huyssen, 'Escape from amnesia: the museum as a mass medium', in *Twilight Memories* (New York, NY: Routledge, 1995). John Urry summarizes some of the discussion of television and postmodernism in *Consuming Places* (London: Routledge, 1995), pp. 20–22.

and does produce a comfortable place – now, when we know better – from which to watch. It is less comfortable, and rather less conclusive, to watch old programmes in their entirety and to witness something of what television was like before it became postmodern.

With many thanks to John Oliver of the British Film Institute's cataloguing department for his indefatigable pursuit of relevant television programmes.

Broadcasting historiography and historicality

PADDY SCANNELL

1 Ernst Breisach, *Historiography* (Chicago, IL: University of Chicago Press, 1994). This standard work covers both aspects of historiography.

2 James Curran, 'Rival narratives of media history', in *Media and Power* (London: Routledge, 2002), pp. 3–54.

3 Daniel Dayan and Elihu Katz, *Media Events* (Cambridge, MA: University of Harvard Press, 1992).

4 See Martin Heidegger, 'Temporality and historicality', in *Being and Time* (Oxford: Blackwell, 1962), pp. 424–55.

By historiography I mean at least two things: the art or craft – the practice – of writing history and, relatedly, the history of that craft, the history of History.¹ Within the craft of history – now in the hands of academic practitioners – the history of media is a fairly well-established subgenre. In his recent magisterial review of the historiography of media, James Curran manages to discover no less than seven different approaches to the history of modern media.² The historicality of media, however, concerns their role in the unfolding of history itself. The subtitle of Daniel Dayan's and Elihu Katz's well-known work on media events is 'The live broadcasting of history',³ that is a central concern of this essay. But how are they connected: liveness, broadcasting and history? The common thread is *time*. Not the time of the universe (cosmological time), nor the time of the natural world (geological time, the theme of natural history), but the time of the being in the world of humanity. Historiography is, one way or another, the narrative of the presence in the world of human beings who are historical because they make history.⁴ The question more exactly, then, is: who is the subject of history and what is history about?

I will consider three possible candidates for the subject of history: first, individuals; second, social institutions (the nation state, the institutions of religion, art and culture); third, humanity itself or, in other words, world history. As for the 'what' of history, it is about those kinds of event wherein history is made. No events, no history, to put it as simply as possible. The uneventful is unhistorical. The task of historiography is to discover the story and write the narrative of the

5 Two succinct reviews of the much debated issues in the relationship between history, events and narrative are provided by Lawrence Stone, 'The revival of narrative: reflections on a new old history', in *The Past and the Present Revisited* (Routledge and Kegan Paul: London, 1984), pp. 74–98; and Peter Burke, 'History of events and the revival of narrative', in *New Perspectives on Historical Writing* (Cambridge: Polity Press, 1991), pp. 233–48. These deal with the topic largely in relation to the writings of historians. It has however become an issue of growing interest in philosophy, literary and social theory in the last forty years. See Geoffrey Roberts (ed.), *The History and Narrative Reader* (London: Routledge, 2001).

6 This distinction owes much to the seminal essay by Georg Lukacs, 'Narrate or describe', in *Writer and Critic* (London: Merlin Press, 1978), pp. 111–48.

7 'An approach to the human individual which assigns a primordial importance to the manner in which he expresses his existence to himself in the form of a more or less coherent narrative'. Jean Laplanche, 'Narrativity and hermeneutics: some propositions', *New Formations*, no. 48 (2002–3), p. 26.

8 *Ibid.* Emphasis in original.

historical event, thereby disclosing its significance.⁵ This is also the task of broadcast coverage of historic events, live and as they happen. In this article I engage with the *possibility* of different kinds of historical narrative and, linked to this, the differences between the written narratives of historiographers and the live-to-air narratives of broadcasters as they engage with history in its making.

By narrative I mean the act of narrating, of telling (in whatever medium) a story. A story, in its classic definition, has a beginning, a middle and an end. Its essential deictic components are time, place and person(s). In other words, stories are always *about* situated someones, somewhere, sometime, who either make things happen or suffer things happening to them. If nothing happens there is nothing to tell. Stories are intrinsically linked to events and have the same essential structure. Events are 'storyable' because they start, go on and end. There are of course, as we shall see, open-ended story-events that have no resolution, but these are variants on the paradigm story structure with a beginning and an end. The task of narrative (for historians or broadcasters) is to find the structure of the story-event under investigation and what it means, thereby disclosing its significance. To narrate is not to chronicle. A chronology merely sets out what happened in its proper temporal sequence. A narrative recovers the significance and meaning of human actions embedded (embodied) in story-structures.⁶ The structure of stories is not, in the first place, a social, cultural or historical phenomenon. It is earlier than any of these; it is a pre-given, existential thing. The structure of stories is homologous with the structure of human life which begins, in each case, with the primary event of birth and goes on, through the lifespan, towards the terminal event-horizon of death. This fundamental structure marks the 'real' conditions of human existence and is that upon which the social, the cultural and the historical articulate and express themselves. Individuals and human societies enact the stories of their existence; that is not to say that they narrate them. Indeed the question of who *can* narrate such stories is crucial.

In his fascinating notes on *narrativity*,⁷ the French psychoanalyst Jean Laplanche observes that it 'is closely connected to the way in which the human being temporalizes himself, and to the idea of afterwardness. In psychoanalysis and psychopathology there is a tendency to privilege narrative *in retrospect*: life-histories, histories of illness and treatment, in accord with the clinical situation itself which is by definition retrospective.'⁸ In the therapeutic situation, analyst and analysand work together by treating the enigmatic past as the obscure aetiology of the troubled now. This might well serve as a description, in a much wider sense, of the work of historiography which necessarily comes after the event and is therefore retrospective in character. The title of the most

influential British history journal, *Past and Present*, underlines this. The temporality of written history moves on an axis from present to past and from past to present.

The act of writing comes after the event of necessity, because written texts are not produced at first go, 'just like that'. Writing (like making a movie) is a discontinuous process of stops and starts – of crossings out, revisions and corrections – in order to produce an edited, final, 'clean' text that is free of spelling mistakes and grammatical errors while maintaining fluency and coherence. Writing is a slow process and itself takes time, a point famously underlined by Lawrence Sterne's Tristram Shandy as he tried to write the story of his own life. The more he wrote, the more time he took up and thus, as he found, he could never bring his life story up to date. The novel stops – it does not come to an end – four years before Tristram's birth. The very act of writing it produced it as a receding narrative that moved away from its eponymous narrator even as he wrote. There is of course, a further time-lag, between the act of writing and the printing and distribution process. The tremendous technological developments in the nineteenth century produced a national daily press designed to overcome as far as possible the time-space constraints of the production circuit of writing-printing-distributing, but even news stories hot from the press reach us hours after they have happened. In short, the medium of writing produces not merely narratives of the past, but the past as something that recedes from the present.

But with radio and television the time of the event and the time of its telling coincide. Both exist in the same phenomenal real time now. The phenomenal now is an aspect of the specific temporality of broadcasting whose most fundamental characteristic is its *liveness*. Liveness is not to be thought of simply as immediacy. We experience immediacy in the live-to-air coverage of events as they happen (a soccer match; 9/11) and in live-to-air news programmes. But the *immediate present*, in broadcasting is possible by virtue of, and exists in a dialectical relationship with, the *historic present* and the *future present*. All are conditional on, and indicative of, broadcasting's dailiness, the complex ways in which the existential, narrative arc of days is articulated in radio and television transmissions. The temporality of days has two existential modes. 24/7 time produces a perpetual present (digital time produces a punctual now which knows no before or after: *now* it is 21.50, *now* it is 21.51 ... ad infinitum). It elides the temporal specificity of days, their primordial existential structure and rhythm. Just as life begins, goes on and ends, so too do days. In all sorts of ways our ordinary language expresses the intimate connection between life and days: the days of our lives. The narrative arc of days – morning, noon and night – corresponds with the narrative arc of our lives. The daily cycle of light and darkness, day and night, adumbrates life's existential conditions of birth, death and regeneration.

Broadcasting attends to the existential structure of days, thereby

producing the phenomenal now in which past, present and future encounter each other. This now (as distinct from the eternal, never-ending now of digital time) is apparent in analogue time, which is told in relation to a past or a future (*now* it is ten to ten; *now* it is ten past ten). In analogue time the present is a dynamic temporality, a present-in-motion, that moves away from the past and towards the future. The phenomenal now gives history its possibility, since its essential structure is homologous with that of events and stories and is thereby, in principle, narratable. The future present shows up as such at the beginning of each day. Start-of-day news is not just *at* that time but *for* that time. In all sorts of ways a rolling three-hour news and discussion programme such as the aptly named *Today* (BBC Radio 4, 6.00 am) is concerned with the day ahead and all the upcoming and ongoing issues that will mark today as this day in particular. The routine, recurring time checks, weather and traffic reports provide relevant data that allow listeners to orient themselves to, and prepare for, the day ahead. End-of-day news (BBC1, 10.00 pm; ITV, 10.30 pm) looks back on what was anticipated in start-of-day news. The historic present is retrospective, concerned with what has happened and what it means. It brings the events-of-the-day into the present in its live-to-air reports and interviews. It too exists in and for its own and particular time-of-day. It summarizes, assesses and, where appropriate, brings closure to the now-passing day. The weather reports that immediately follow nightly news are oriented to tomorrow. News junkies, who switch to *Newsnight* (BBC2, 10.30 pm) after the news, know that they will get further discussion and comment on the events of the day. The programme always ends with a brief look at tomorrow's newspaper headline stories, thereby indicating closure and renewal.⁹ Thus routinely, day by day, broadcasting articulates and expresses each day in its prospective and retrospective character – its ontology of expectations, its assessments of whether they were met – in the live momentum of the phenomenal now from morning through to night.

⁹ In the 1960s the BBC had a five-nights-a-week magazine programme called *Tonight*, which famously ended each transmission with the immortal exit line, 'The next *Tonight* will be tomorrow night'!

¹⁰ This awkward terminology is used (not entirely successfully) to avoid the problematic distinction between scripted and unscripted artefacts. Prescribed products include paintings, books, newspapers, films or musical scores that are produced (created) prior to their circulation or distribution. Unprescribed products – oral poetry, improvised music and live-to-air broadcasts – are produced in and for the moment of their transmission and distribution. The distinction is between cultural products (artefacts) and cultural productions (performances), between 'dead' things and 'live' actions.

Live-to-air broadcasting faces generic problems that are absent in prescribed production processes. First and foremost it must minimize risk. It needs procedures designed to prevent technical failure and human error in order to avoid performance failure or breakdown. This is not a problem for prescribed products: an article, a book, a movie. It is the problem for unprescribed productions, since performance failure or technical breakdown cannot be concealed and the live coverage is visibly disrupted.¹⁰ Thus one side of the management of liveness is negative: the avoidance at all times of performance failure. The other side of the problem is to produce the unfolding event as that which it is: if it is solemn and serious, funny or horrific, it must be shown as such. *Mood* is intrinsic to events and the management and maintenance of mood for absent audiences is a cardinal consideration of live broadcasting. At the same time, the meaning, the significance, of what

is happening must always be attended to, on behalf of audiences who are not there themselves and who may not necessarily be able to follow what is going on.

The management of live broadcasting is crucially concerned with the maintenance of continuous, uninterrupted coverage. Continuity is not just one thing after another, a sequence strung together. It must also be coherent. It must make sense. And it must be relevant. It must work to sustain the nature of the occasion and its situational proprieties. Work on film narrative shows how continuity editing works to sustain a coherent point of view for the spectator by maintaining a stable visual field in which the spatial relationship between things and people stays consistent and within the same axis of action. Live television coverage works in a similar way to secure visual continuity from shot to shot, but its production management is very different from film, involving multi-camera setups which can vary from the standard rig of up to a dozen cameras for soccer matches to well over a hundred reporter/camera crews for a major political occasion such as an election night. Television coverage is minimally designed to keep pace with – to cover – a real world event as it unfolds in real time. But today, routinely, it does a great deal more than this. It narrates. Shot selection and edits from shot to shot, combined with ambient sound and commentary, capture the atmosphere, the reactions of those who are there, and thereby create mood – involvement, participation – for viewers. At the same time they indicate something of the significance, the meaning, of what is taking place, not only for those who are present in the event, but in a wider, more general, sense. And it is all, of course, done live with no possibility of concealing mistakes if they should occur.

Dayan and Katz raised questions about the relationship between events, narrative and history. Events occur when something happens in the world. They come in two varieties: the things that happen to us, and the things we make happen. Dayan and Katz focus wholly on the latter class of events. The title of the French edition of *Media Events* makes this clear: it is called *La télévision cérémonielle* and deals with festivals, celebrations and ceremonial occasions. The things that happen to us are a fundamental concern of news. They include disasters, the simplest taxonomy of which distinguishes between natural and human catastrophes. Natural disasters include earthquakes, volcanic eruptions, storms, hurricanes, disease, fire and flood and so on. Insofar as these have an impact on human life, they are fateful events that are intrinsically historical. The great disasters of the past echo down through the millennia, from the Great Flood onwards, the Great Plague in fourteenth-century Europe, the Great Fire of London, and so on. They are, as a matter of routine, reported in today's news from all over the world.

Disasters, whether natural or human, are not meant to happen. They come upon us unexpectedly, out of a clear blue sky. Insofar as they

were not in the first place meant and intended, they appear strictly meaningless. We think of them as accidents, pointless tragedies. The task of disaster narratives in news is to find their meaning: what happened, who was affected, how many dead, how many alive, how is it being dealt with now, why did it happen, what can be done to prevent such a thing in future? In respect of human disasters the question 'why?' quickly becomes a matter of finding fault. These questions scarcely arise in respect of natural disasters: was it the fault of the weather or God? But the politics of blaming is intrinsic to human disasters and to finding their meaning. The day's coverage of 11 September 2003 is the most extraordinary instance of the historical work routinely performed by broadcast news. When the first plane struck it was incomprehensible. When the second plane struck it was unbelievable. By the end of the day, however, newsrooms the world over had accounted for what had happened; shown what was being done for those most immediately caught up in what had happened; come up with plausible accounts of who had done it; and forecast the political consequences. Past, present and future are routinely worked together in broadcast news, one of whose most basic functions, in moments of catastrophe, is to render meaningful and accountable that which at first appears meaningless and inexplicable.

In so doing journalists act not merely as chroniclers but as historians of the present. Some professional historians have been deeply dismissive of this, rejecting what the *Annales* School called *histoire événementielle* as a superficial distraction from the real underlying task of historical analysis:

Instead of a history of events we should speak of a short time span, proportionate to individuals, to daily life, to our illusions, to our hasty awareness – above all the time of the chronicle and the journalist.... Side by side with great and, so to speak, historic events, the chronicle or the daily paper offers us all the mediocre accidents of ordinary life: a fire, a railway crash, the price of wheat, a crime, a theatrical production, a flood.... At first sight, the past seems to consist in just this mass of diverse facts ... but this mass does not make up all of reality, all the depth of history on which scientific thought is free to work. Social science has almost what amounts to a horror of the event.¹¹

¹¹ Fernand Braudel, 'History and the social sciences: the *longue durée*', in *On History* (London: Weidenfeld and Nicolson, 1980), p. 28.

Braudel shares that horror of the event, whose 'delusive smoke fills the minds of contemporaries' but soon flickers and dies, leaving no lasting trace. The proper concerns of historians are not with the ephemera of daily life – for Braudel as for many intellectuals of the last century, the sphere of illusions and ideology – but with 'the depth' of history, slow time, what Braudel called the *longue durée*. The turn to a structural analysis of history, to the underlying determinants of historical actors and the events they enact, to their political and economic conditions, was undoubtedly driven by the neglect of these determining factors in

narrative histories. But it is not an either/or. That narrative history needs complementing by other kinds of history is by now beyond dispute. Yet events, whether natural (and suffered by us) or human (and created by us), remain at the heart of history's concerns, since without them it is impossible to imagine what historiography might be about.

Life, I have suggested, has a clear, obvious and well understood structure that is intimately linked to events and stories because they are all homologous. Life, event and narrative all have a beginning, a middle and an end. It is the end that is determinate, that throws the structure of our existence into sharp relief, that discloses it as a particular temporal structure.¹² Death renders life meaningful. It is the foil that illuminates a life. It is only in death that the full narrative account of a life can be essayed, since only in death are all possible future plotlines closed down. The closure of death foreshadows narrative closure and gives the sense of an end to stories. It also gives us our sense of direction, since death is that towards which an individual life is pointed from the moment of birth. Birth and death are the first and last determinates of life, which stretches between these two moments, moving away from one and towards the other. We call this the *lifespan* and the movement through it, the *lifecycle*: childhood, youth, adulthood, old age and death. The life cycle is a predetermined sequence with a narrative arc of growth, maturity and decline. It is irreversible. It is consequential. Death discloses a life as such and silently begins to reveal what it was and meant. The narrative of a life is an edited post-production.

We all understand that life is something which is, in each case, 'mine'. It is my own, and no one else's. I am, of course, in a very obvious way – at least in societies such as ours – the author of my life story. The choices I make along the way are determinate: they open up certain possibilities and foreclose on others. But I am not – nor could I be – the author of the narrative of my life. All life stories written in the first person are a form of special pleading, an egotism, an apologia, and as such must be taken by others with a pinch of salt, however much fun they may be to read.¹³ It is not simply that the narrative of an individual only becomes completely and fully available after death. A narrative does not merely chronicle or describe a life. It must assess and evaluate it if it is to determine its significance, and that is never available to any of us. Was it a good life? Was I a good parent, husband, teacher, writer? Was I a good golfer? Was I good fun? I might like to believe that I was good in some, at least, if not all of these ways, but even so I cannot lay claim to any of them as self-evaluations because in each and every case it is not for me, but for others, to say. This is the impossibility of the first-person point of view as a narrative device for life histories. None of us is in a position to measure the impact of our life on others or, in other words, our historical significance. We lack an appropriate point of view. We cannot see ourselves as others do. The

¹² On this theme, see Heidegger, *Being and Time*, pp. 279–311.

¹³ This is true at least for the autobiographies of public persons (politicians, celebrities, and so on) but not, perhaps, for those of unhistorical individuals who put on record what would otherwise be an unrecorded and unexamined existence.

measure of the worth of individual existences does not lie with the individuals themselves. It is for others, for the world, to say.

But a great deal of historiography concerns not individuals but human institutions of one sort or another. From a sociopolitical perspective we think of the great institutions of economic, political, religious and cultural life as power containers. Historians are concerned with their temporality, with how they endure through generations as devices that overcome the ruin of mortality. Such histories, of course, do not have the same narrative structure as life histories whose existential story structure ends in death. How then are institutions storyable? What is their story structure? The pioneering work of Christine Geraghty on the narrative structure of television drama serials is particularly illuminating in this connection.¹⁴ The first episode of a new soap, as she points out, presupposes an already existing world, and appears to cut into it as if it were already there, up and running. Moreover, while the subject of a life story is naturally enough an individual, the subject of soaps is a social world of some sort: the life-world of a particular place or an institution. They are narratives of complex, structured social collectivities and are characterized by the interweaving of several different plotlines at any time. Geraghty is particularly illuminating on the temporality of soap operas: how they go on in time, their interconnected sense of their past and future as it shows up in any episode. Above all she suggests that their structure is a device to generate a continuing unbroken coherent narrative that can, in principle, go on forever. My question again is: who writes (who can write) such narratives?

Many years ago I saw a performance in London of Japanese Bunraku theatre. Bunraku is a puppet theatre but unlike marionettes, which are attached to strings and manipulated by hidden puppeteers, the Bunraku puppets are held and manipulated by puppeteers who are unconcealed. The puppets are quite large, maybe three feet in height, and exquisitely made with perfect porcelain faces and gorgeous costumes. Each puppet has at least three handlers, dressed in black, their faces masked, but in full view of the audience. After a while you become aware of the extraordinary illusion this theatre produces. It seems as if – and this is quite magical – that it is the puppet who manipulates its handlers and not the other way around. The puppet, it seems, imperiously puts out its hand, and the puppeteer obediently responds and places there a fan which the puppet immediately snaps open. The puppeteers, it seems, are the servants of the puppet. And so it is with the fictional narratives of radio and television. The story scripts and enacts itself and its producers (scriptwriters, actors, production staff) are its servants.¹⁵ *The Archers* (BBC Radio 4), to which I have listened for more than twenty years, is half a century old: many of those who wrote, produced and acted in it are dead and forgotten, yet the story continues, unfolding day by day, quietly projecting into an indefinite future that has no

¹⁴ Christine Geraghty, 'The continuous serial – a definition', in Richard Dyer et al., *Coronation Street*, Television Monograph 13 (London: British Film Institute, 1981), pp. 9–26.

¹⁵ Hobson's excellent study of *Crossroads* (a British soap that ran from 1964 to 1988, but was recently resurrected and restored briefly to our television screens) is illuminating on the attitudes of actors and the production team to their 'puppet'. Dorothy Hobson, *Crossroads: the Drama of a Soap Opera* (London: Methuen, 1982).

necessary terminal point. Such narratives are peculiar to daily broadcast services and are formally indicative of their fundamental temporal structure.

The historical life of human institutions is like this too. They script and enact themselves and those who work in them are their servants. What can historians of institutions do but cut into their history at a certain point, pursue it for a time and then cut out of it? David Cardiff and I did this in our history of the early BBC.¹⁶ We took a natural starting point – the beginning of a broadcast service in the UK – and a convenient end point – the outbreak of World War II. Our narrative had many parallel and overlapping storylines as we traced the development of news, talks, features, music, variety and outside broadcasts. And all these areas of output, plus others, are produced in order to serve the schedule which is the puppet that manipulates, that drives, the whole apparatus of broadcasting. It is the schedule that must at all times and for ever be maintained and fed with a never-ending flow of diverse programme matter. The difference between our history of the BBC and the work of those within the institution who supply the schedules is that our work is of necessity retrospective while theirs is of necessity prospective. No historian ever imagines that they could write a definitive history. History, as we know full well, is always inevitably greater than our individual efforts because it is inexhaustible; it keeps on going, projecting into a never-ending future, whereas mere mortal historiographers do not.

My third candidate for the subject of history is the world itself. This history, for us in the West, is deeply saturated by the narrative of the world as told in the Old and New Testaments. This teleological narrative is one of original human alienation from God, the historical struggle for redemption, and for final reconciliation and reunion with the Creator. As and when that should come to pass, time ceases and history comes to an end. It is well understood that the Enlightenment rewrote this *grand narrative*¹⁷ as a secular, human-centred narrative of progress: the realization of the Kingdom of Heaven on Earth in the form of the truly good and just society. The greatest version of this narrative is Hegel's philosophy of history.¹⁸ For Hegel, *Geist* is more than consciousness or mind. It is the spirit of humanity as a whole (past, present and future) whose historical destiny is reconciliation not with God but with itself. The world-historical destiny of humanity is thus the working out of its own self-understanding. In achieving this, humanity perfects itself, and history as struggle (or, as John Ellis puts it, as 'working through')¹⁹ again comes to an end. Marx rewrote Hegel's grand narrative in terms of class struggle; the achievement of world socialism would mark the end of history as that struggle.

Hegel gave us the idea of world history, and in the first half of the last century historians took up the challenge and attempted to write it. One of its last and most original practitioners was the Canadian

¹⁶ Paddy Scannell and David Cardiff, *A Social History of British Broadcasting, Volume I, 1922–1939: Serving the Nation* (Oxford: Blackwell, 1991).

¹⁷ Jean Francois Lyotard has elegantly defined postmodernism as incredulity towards grand narratives. *The Postmodern Condition: a Report on the Condition of Knowledge* (Manchester: Manchester University Press, 1986), pp. xxii–xxiv.

¹⁸ On the impact of Hegel's *Phenomenology of Mind* (*Geist*) on historiography see Breisach, *Historiography*, pp. 231–2, and especially 'The enigma of world history', pp. 395–403.

¹⁹ John Ellis, *Seeing Things* (London: IB Tauris, 2002), pp. 74–90.

²⁰ Harold Innis, *Empire and Communication* (Oxford: Oxford University Press, 1950), and *The Bias of Communication* (Toronto: Toronto University Press, 1964).

²¹ The key work is Innis's magnificent 1930 study of *The Fur Trade in Canada* (Toronto: Toronto University Press, 1999).

²² Oswald Spengler *The Decline of the West* (1918) and Arnold Toynbee, *Study of History* (1934–9). For a succinct overview of both, see Breisach, *Historiography*, pp. 397–400.

economic historian Harold Innis,²⁰ whose earlier work consisted of detailed studies of transport (the Canadian Pacific Railroad) and the staples of the nineteenth-century Canadian economy: fur, cod, timber and pulp.²¹ Innis came to see that what underpinned all his objects of enquiry were basic issues about the movement of goods and people, an economic and political geography determined by the available transport and communication infrastructure. The infrastructure, he came to realize, was most fundamentally concerned with the management of time and space. Developments in transport and communication had a determinate effect on the scope of human praxis. Spengler and Toynbee had attempted to write world history in terms of the rise and fall of civilizations and religions.²² Innis rewrote it in terms of the management of time and space. The movement of *Geist* in history was replaced by the movement of goods and people.

This kind of historiography has long since fallen out of fashion and shows little sign of a comeback. Was it, is it, could it ever be, a meaningful project? Whichever version of the narrative you prefer – the Bible, Hegel, Marx, Innis – it seems to me to have, at least, a robust story-structure. We understand well enough, today, that there was a time (the time of the universe, the time of the natural world) before the existence of humanity. We can well conceive a time after humanity. These are the familiar lineaments of the history of the human race. What lies between the beginning and the end of humanity is the history of its working through towards its end. But has it an end, an aim, a goal, a teleology? That of course is the crux. Who can say? Can we, the living, at any time? Historical truth is something to which we can, indeed, bear witness. But it is not something we could ever possess, for we ourselves – the living – are always and unavoidably in a relative position to historical truth: the unfolding story of the presence in the world of human beings. Every individual, every generation, contributes to the scripting and enactment of this single unfolding, eventful story, but it is an impossible narrative for none of us possesses a point of view from which it could be written. Formerly we understood it as God's narrative since to Him we attributed a sufficiently transcendental narrative point of view from which it could be told. But that understanding is no longer available to us. It is our fate today to be incredulous of grand narratives.

I have pointed up the intrinsic connections between human existence, events, stories and narratives. Existence has a clear spatiotemporal story structure: a life is always a situated life; a someone somewhere sometime. It has a narrative arc of growth, maturity and decline. It is 'storyable' insofar as it is eventful. Individuals, I have argued, author the story of their lives but cannot write its narrative. Institutions are human creations for the management of life in the long term. They are devices designed to transcend mortality. They work to produce the world as always already there in advance, so that the living can always

find themselves to be in a world of some sort. As such they are transcendental structures designed to segue from one generation to the next, surmounting the diremptions of death and maintaining the continuity of the world. Their narrative structure is like that of soap opera: self-enacting, self-regenerating story-structures that transcend those who at any time write, produce and perform them. Such is human history, in its innumerable institutional instances and as a whole. Does the world have a history? I have tried to suggest that it does. The difficulty is that although we make this history, it cannot be written by any of us because there is no human vantage point from which to write it.

Three distinct orders of human time have been considered: the time of individuals, of social formations, of the world as a whole. These radically incommensurate historical temporalities are all embedded in each other, but how are they connected? The times of individuals, of institutions and the world can only come together insofar as they are able to enter into a common, available time:

A standardised dating system, now universally acknowledged [and the establishment in the nineteenth-century of world standard time], provides for the appropriation of a unitary past, however much such 'history' may be subject to contrasting interpretations. In addition, given the overall mapping of the globe that is today taken for granted, the unitary past is one which is worldwide; time and space are recombined to form a genuinely world-historical framework of action and experience.²³

As Giddens points out, the realignment of the calendar, combined with the creation of universal standard time (GMT), establishes a common world time. Global transport and communication networks form interlocking grids that connect up the whole world. Broadcasting makes visible this world-in-common and day in, day out reiterates it. By broadcasting I mean not its manifestation anywhere in particular – not the services in the UK with which we are familiar, or French, or American broadcasting – but simply broadcasting as such: a global apparatus or network. At first broadcast services were local, then regional and national. They still appear as such, in situ, everywhere, but they are now globally interconnected. On major news stories the same audiovisual data appear in programmes the world over. The fact that they are narrated and interpreted differently should not obscure the central point: the death of Diana and 9/11 were global stories that indicate the common world in which all of us live and in which, however obscurely, all our lives are interconnected. Such interconnectedness is manifest on such occasions and in the ceremonial events which are the theme of Dayan and Katz.

Broadcasting the world over, daily and routinely, is caught up in the enactment of history and at the same time in its interpretation and evaluation. It has well-established devices and routines for narrating

²³ Anthony Giddens, *The Consequences of Modernity* (Cambridge: Polity Press, 1990), pp. 20–21.

²⁴ Audio recordings capture and replay the liveness of the human voice as it speaks or sings.

²⁵ See Ian Hutchby, 'The communicative affordances of technological artefacts', in *Conversation and Technology* (Cambridge: Polity Press, 2001), pp. 13–33. Hutchby derives his concept from the work of J.J. Gibson on the psychology of perception: *The Ecological Approach to Perception* (London: Houghton Mifflin, 1979), and *Reasons for Realism: Selected Essays* (Hillsdale, NJ: Lawrence Erlbaum Associates, 1982).

²⁶ This phrase is taken from Joshua Meyrowitz, *No Sense of Place* (New York, NY: Oxford University Press, 1985), p. 6.

events-in-the-world, live and as they happen anywhere. But the liveness of broadcasting is not simply a feature of certain kinds of live-to-air programmes. It is not the opposite of recorded programmes.²⁴ Nor is it just an effect of technology. It is nothing to do with broadcasting in the first place. Liveness refers, after all, to being alive, the aliveness of our being. It is an existential phenomenon (the condition of our existence) that is reflexively redeemed by twentieth-century electronic technologies whose unique *communicative affordance*²⁵ is to give us, in unprecedented fashion, continuous daily access to the life and times of the world in which we live. This begins to disclose the world-historicity of radio and television which links individuals and the times of their lives to the times of the historical societies (or nation states) in which they live and to the time of the world as a whole. These interconnected orders of time and their *situational geographies*²⁶ are embedded in the daily schedules of broadcasting the world over. Through them we are gathered into the common world in which all of us encounter our worldly being-with-one-another as a relational totality of involvements.

Broadcasting makes sense of what is happening in the phenomenal now, without the wisdom of hindsight that is the privilege of historiography. Writing comes after the event. Electronic media are *in* the event. Writing moves on an axis between past and present. Broadcasting, situated always in the existential now (the nexus of the historic, immediate and future present), is structured in anticipation of what is to come. Historicity faces the future, whereas historiography faces the past. The historicity of humanity consists in its unique capacity to give itself a world and thereby to make, to create, its own history which is always the history of the world – that is, the known-and-available world as it is understood at any historical time by those who live in it. The historicity of broadcasting consists in its double role in the historical process. At one and the same time it contributes to the making of history while showing, recording and narrating it. Historiographers in the future – a century from now, say – will look back to broadcasting in our times in order to find out not only how we made our history but also how, through daily media, we told and understood it at the time.

I am most grateful to Bill Schwarz and Annette Kuhn for their helpful comments on the first draft of this article.

A global test of the pollination syndrome hypothesis

Jeff Ollerton^{1*}, Ruben Alarcón^{2,3,7}, Nickolas M. Waser^{2,4,7}, Mary V. Price^{2,4,7}, Stella Watts¹, Louise Cranmer¹, Andrew Hingston⁵, Craig I. Peter⁶ and John Rotenberry²

¹*Landscape and Biodiversity Research Group, School of Applied Sciences, University of Northampton, Park Campus, Northampton NN2 7AL, UK*, ²*Department of Biology, University of California, Riverside, CA 92521, USA*, ³*Department of Ecology and Evolutionary Biology and Center for Insect Science, University of Arizona, Tucson, AZ 85721, USA*, ⁴*School of Natural Resources, University of Arizona, Tucson, AZ 85721, USA*, ⁵*School of Geography and Environmental Studies, University of Tasmania, Private Bag 78, Hobart, Tasmania, 7001, Australia*, ⁶*Department of Botany, Rhodes University, PO Box 94, Grahamstown, 6140, South Africa* and ⁷*Rocky Mountain Biological Laboratory, PO Box 519, Crested Butte, CO 81224, USA*

Received: 29 October 2008 Returned for revision: 20 November 2008 Accepted: 7 January 2009 Published electronically: 14 February 2009

- **Background and Aims** ‘Pollination syndromes’ are suites of phenotypic traits hypothesized to reflect convergent adaptations of flowers for pollination by specific types of animals. They were first developed in the 1870s and honed during the mid 20th Century. In spite of this long history and their central role in organizing research on plant–pollinator interactions, the pollination syndromes have rarely been subjected to test. The syndromes were tested here by asking whether they successfully capture patterns of covariance of floral traits and predict the most common pollinators of flowers.
- **Methods** Flowers in six communities from three continents were scored for expression of floral traits used in published descriptions of the pollination syndromes, and simultaneously the pollinators of as many species as possible were characterized.
- **Key Results** Ordination of flowers in a multivariate ‘phenotype space’ defined by the syndromes showed that almost no plant species fall within the discrete syndrome clusters. Furthermore, in approximately two-thirds of plant species, the most common pollinator could not be successfully predicted by assuming that each plant species belongs to the syndrome closest to it in phenotype space.
- **Conclusions** The pollination syndrome hypothesis as usually articulated does not successfully describe the diversity of floral phenotypes or predict the pollinators of most plant species. Caution is suggested when using pollination syndromes for organizing floral diversity, or for inferring agents of floral adaptation. A fresh look at how traits of flowers and pollinators relate to visitation and pollen transfer is recommended, in order to determine whether axes can be identified that describe floral functional diversity more successfully than the traditional syndromes.

Key words: Convergent evolution, floral traits, global, montane meadow, multidimensional scaling, mutualism, phenotype space, pollination syndromes, temperate grassland, test, tropical forest, tropical mountains.

‘[*Solanum dulcamara*] ist . . . ein gutes Beispiel . . . der Willkürlichkeit und Unnatürlichkeit, in die man unvermeidlich verfallen muss, wenn man die fast unendliche Mannigfaltigkeit der Blumenformen in eine gewisse Zahl scharf umgrenzter Grundformen (Typen) einzuzwängen versucht.’

(‘[*Solanum dulcamara*] is . . . a good example . . . of the arbitrariness and unnaturalness one must unavoidably fall into, if one tries to force the almost infinite diversity of floral form into a certain number of sharply delineated basic forms [types].’)

Hermann Müller (1882, p. 20)

‘As accumulation of knowledge continues, we eventually find facts that will not fit properly into any established pigeon-hole. This should at once be the sign that possibly our original

arrangement of pigeon-holes was insufficient and should lead us to a careful examination of our accumulated data.’

H. A. Gleason (1926, p. 7)

INTRODUCTION

Convergent evolution is a ubiquitous feature of the biosphere, as indicated by correlations between phenotype and ecology across distantly related taxa. Examples include the broad correlations between tooth traits and diet in mammals (e.g. Eisenberg, 1983) and between leaf traits and the physical environment in higher plants (e.g. Givnish, 1986). In pollination ecology, ‘pollination syndromes’ provide the prototypical example. These are suites of convergent floral traits hypothesized to adapt distantly related angiosperm species to particular types of pollen vectors. Distinct syndromes have been proposed for abiotic pollination by wind or water, as well as

* For correspondence. E-mail jeff.ollerton@northampton.ac.uk

for pollination by broad animal groups such as butterflies, bees or birds. The pollination syndromes have roots in the writings of Federico Delpino (1873–1874), who proposed two distinct schemes for categorizing flowers according to traits such as shape, colour, scent and size. Delpino's schemes were discussed vigorously in the literature (not always favourably; the quote above from Hermann Müller is a critique), and eventually merged by Vogel (1954) and further modified by van der Pijl (1960) and Faegri and van der Pijl (1979). Waser (2006) provides a historical overview of developments that led to the current manifestation of these traditional pollination syndromes.

The pollination syndromes have been of service in three main ways. First, they have supplanted earlier, more phenomenological schemes for organizing the overwhelming phenotypic diversity of flowers. Indeed, their second use has been to provide a mechanistic explanation for floral diversity, i.e. convergent adaptation for specific types of pollinating agents (e.g. Fenster *et al.*, 2004). Finally, they have been and still are used to infer what pollinates plant species in the absence of direct observations (e.g. Pérez *et al.*, 2006; Whittall and Hodges, 2007). It is no surprise, then, that the syndromes have played a central role in the development of pollination biology, as evidenced by their prominent position in review volumes (e.g. Knuth, 1898; Faegri and van der Pijl, 1979; Proctor *et al.*, 1996), and by their continued use (e.g. Fenster *et al.*, 2004; Whittall and Hodges, 2007).

However, the pollination syndromes represent a specific hypothesis regarding the nature of floral variation and its ultimate causal roots. Surprisingly, little effort has been made to subject this important hypothesis to any form of rigorous test at a large (e.g. community) scale. Previous tests of the hypothesis have been theoretical (Ollerton and Watts, 2000) or have focused on single plant species (e.g. Consiglio and Bourne, 2001; Hargreaves *et al.*, 2004; Zhang *et al.*, 2005; Valdivia and Niemeyer, 2006), small clades (e.g. Kay and Schemske, 2003; Wilson *et al.*, 2004; Wolfe and Sowell, 2006) or specific floral traits (Herrera, 1996; Waser *et al.*, 1996; Perret *et al.*, 2001; Raguso *et al.*, 2003; Ramírez, 2003) – often a subset of the phenotypic traits by which the traditional pollination syndromes have been described, or novel traits specific to certain clades (e.g. Kay and Schemske, 2003; Wilson *et al.*, 2004; Pauw, 2006). As valuable as these approaches are, the only previous study which assessed the predictive value of traditional syndromes in diverse communities, using a wide range of floral traits and with no prior knowledge of pollinators, was that of Hingston and McQuillan (2000).

In this study we attempted a general test of the utility of the traditional animal pollination syndromes. To this end, we ask two questions, (1) Do most animal-pollinated plants fit into traditional pollination syndromes? (2) Do these syndromes successfully predict the most frequent pollinators of the flowers? Data were collected for the test in six plant communities around the world. Flowers in these communities were chosen in an unbiased way and scored in standardized fashion for phenotypic traits included in the most commonly cited statement of the animal pollination syndromes, that of Faegri and van der Pijl (1979), with secondary reference to Proctor *et al.* (1996) in a few instances. We began by ordinating the descriptions of these traditional syndromes to define a multivariate phenotype space that described the distribution of groups defined by the syndrome attributes. We next calculated scores for individual plant species in this multivariate space and asked whether they fell within the traditional syndrome clusters. Finally, we asked whether the most frequent pollinators of plant species fit those predicted by the nearest syndromes.

METHODS

Community surveys

Floral traits were surveyed in six communities from Africa, North America and South America, ranging from temperate grassland and sub-alpine meadows to tropical rainforest (Table 1, and Supplementary Data 1, available online). The surveys encompassed all of the animal-pollinated plants in bloom and accessible in each community during the survey period, between 25 and 90 % of all of the biotically pollinated plants in the community. The pollinators of as many plants as possible were also observed, as explained in Supplementary Data 1. A visitor was considered to be a pollinator only after five or more 'legitimate' visits (i.e. not nectar or pollen robbing) by that animal species to different individuals of a given plant species had been observed, and after evidence of contact between the animal and both male and female reproductive organs of flowers had been obtained. Pollinators were pooled into functional groups (*sensu* Fenster *et al.*, 2004; Ollerton *et al.*, 2006, 2007) of similar species (e.g. 'bees', 'birds', 'butterflies'). For plants visited by more than one functional group, the major pollinator group was identified on the basis of visit frequency.

Faegri and van der Pijl (1979) and Proctor and Yeo (1996) describe 11 syndromes for animal-pollinated plants: bat, bee,

TABLE 1. Characteristics of the communities surveyed in this study

Site	Latitude	Longitude	Elevation	Survey month	Survey year	Habitat type(s)	No. of plant species surveyed	% of plant species surveyed
Guyana	3°16'N	59°45'W	100 m	April	2000	Rainforest, savannah	92	Approx. 50 %
Venezuela	10°28'N	67°45'W	5 m	May	2000	Coastal scrub, rainforest	70	Approx. 30 %
South Africa	29°37's	30°08'E	1200 m	December–January	2000–2001	Grassland	70	Approx. 25 %
Colorado	38°59'N	106°58'W	3400 m	June–August	2000, 2001	Dry montane meadow	55	Approx. 90 %
California	34°13'N	116°57'W	2316 m	June–August	2001, 2002, 2003	Dry montane meadow	66	Approx. 75 %
Perú	13°12's	72°5'W	4000 m	January	2002	Cloud forest, open scrub	129	Approx. 60 %

beetle, bird, butterfly, carrion fly, fly, hawkmoth, moth, non-flying mammal and wasp. Each syndrome is characterized by timing of anthesis, the presence and qualities of floral scent and nectar, and aspects of flower colour, size and morphology. From the syndrome descriptions of these authors, 41 floral traits were identified in 13 broad categories (see Supplementary Data 2, available online), and these were used to score flowers in our six communities, as well as the idealized syndrome descriptions (see below), for the presence (scored as 1) or absence (scored as 0) of each trait manifestation. Thus flowers of each plant species were described by a vector of 41 ones and zeroes.

An earlier study by Ollerton and Watts (2000) generated a single floral trait vector for each idealized syndrome, but syndromes actually comprise multiple trait combinations. For example, the bee pollination syndrome comprises, amongst other traits, vividly coloured flowers with or without nectar guides, and thus is described by trait vectors scoring 1 on vivid colour and either 1 or 0 for presence of nectar guides. Therefore, multiple trait vectors consistent with each syndrome were generated, yielding 537 total vectors across ten syndromes (moth and hawkmoth syndromes were combined because preliminary analysis showed that they were indistinguishable using this approach). Supplementary Data 3 (available online) shows the idealized syndrome vectors.

Statistical analyses

Non-metric multidimensional scaling (NMDS) in PC-ORD 5.14 (McCune and Mefford, 2006) was used to ordinate the 537 vectors described above. Unlike other ordination techniques, such as principle components analysis (PCA) or detrended correspondence analysis (DCA), NMDS makes no assumptions as to the distribution of the variables (Minchin, 1987; McCune and Grace, 2002; McCune and Mefford, 2006). Instead, NMDS ordinates objects based on rank distances, thus preserving ordered relationships, so that similar objects are close to each other (Legendre and Legendre, 1998). Sorenson's index (Bray–Curtis), which expresses the proportion of the maximum distance possible, was used to establish distance relationships between the objects in our data set (McCune and Grace, 2002). Sorenson's index maintains its sensitivity with complex data and is recommended for binary data such as ours (Beals, 1984; Faith *et al.*, 1987; Boyce and Ellison, 2001; McCune and Grace, 2002; McCune and Mefford, 2006).

NMDS uses an iterative approach for arranging objects in X dimensions, while minimizing stress, or departure from the distance relationships in the original data (McCune and Mefford, 2006). By comparing the level of stress (0–100, with 0 = no stress) in relation to the dimensionality, it is possible to identify a smaller number of dimensions that still preserve the original distance relationships among the objects with minimum stress (Legendre and Legendre, 1998; McCune and Grace, 2002). The best dimensionality to represent the data was identified by calculating the average stress values for 1–6 dimensions for 100 runs of real data (see below). These were compared with a Monte Carlo test with 500 ordinations of randomized data. Mean stress declined

from one to three dimensions, but did not appreciably decline further for higher dimensionality. Therefore, a three-dimensional (3-D) space was chosen for analyses.

A single run of the NMDS analysis first assigned random starting coordinates for the 537 idealized trait combinations in an ordination space of three dimensions, calculated Euclidean distances among the coordinates and compared the resulting distance matrix with distance relationships in the original trait space. Then the coordinates were moved along gradients of decreasing stress within the 3-D space until a local minimum was achieved. This process was repeated for 500 sets of random starting coordinates to find the best global solution, rather than a solution representing only a local minimum. Finally, the best of the 500 solutions was used as a starting point for one final run, which yielded the final ordination of the ten idealized pollination syndromes as clouds of multiple alternative trait combinations in three dimensions.

Ordination of the idealized syndrome trait combinations yielded a 'phenotype space' into which real plant species could subsequently be assigned. Coordinates were calculated for the plant species from each of the six communities, using the NMDS Scores Prediction algorithm in PC-ORD 5.14. This algorithm is conceptually similar to regression techniques, in that new observations are presented to a model, which then produces the corresponding outputs without altering the model itself (McCune and Grace, 2002). This is achieved by a successive focused search for the best position in the NMDS space, i.e. the position that minimizes the overall stress (McCune and Grace, 2002). In the first step, each axis, plus 20 % of the margins on both ends, is divided into 28 segments. The section with the lowest stress value is chosen, and is sub-divided into ten smaller intervals. The interval with the lowest stress is again chosen and is sub-divided once more into ten intervals. In the last round of the search, the coordinates with the lowest stress are identified as the best position for the particular observation (McCune and Mefford, 2006).

After calculating the position for each plant species in a community, the species were assigned to idealized syndromes based on the shortest Euclidean distance between the coordinates of each flower in the NMDS space and the centroids of clusters of points representing idealized syndromes. Alternative methods, including discriminant function analysis (DFA) and hierarchical clustering, produce similar results (not shown). So as not to be overly conservative in the assignment of plants to syndromes, we considered not only the closest syndrome to each flower, but also the second closest syndrome, so long as this was within 10 % of the distance to the first closest. Next, to address whether pollination syndromes accurately predict actual pollinators, the expected pollinators to each plant species were compared with our field observations of the most frequent pollinators.

Data for each community will be deposited in the Interaction Web Database at the National Center for Ecological Analysis and Synthesis (<http://www.nceas.ucsb.edu/interactionweb/>). In Supplementary Data 4 (available online) we list all plant species from each community that were included in the analyses, together with predicted pollinator groups and observed major pollinators.

RESULTS

Idealized syndromes and real flowers in phenotype space

NMDS ordination of the idealized syndromes resulted in well-resolved discrimination in 3-D phenotype space that retained nearly 90 % of the variance of the original among-syndrome variation (stress = 12.78, axis 1 $R^2 = 0.28$, axis 2 $R^2 = 0.50$, axis 3 $R^2 = 0.10$, cumulative $R^2 = 0.88$). Correlations between particular floral traits and the three axes can be seen in Supplementary Data 2 (available online). In this analysis, the traditional syndromes therefore occupy discrete regions of the phenotypic multivariate space, with no overlap (Fig. 1A), although some syndromes fall closer together than others (e.g. bat and non-flying mammal, bee and butterfly).

If plants within a community conform to the floral trait combinations expected by traditional pollination syndromes, then they would be expected to fall within or near the idealized syndrome clusters. In Fig. 1B–G, each plant surveyed within our six communities has been scored in the same NMDS space defined by the traditional syndromes. In all the communities some of the plants cluster together on the basis of shared floral traits. Whether or not they form clusters, however, actual flowers rarely fall within clouds of points representing an idealized syndrome. Only three of 482 species (approx. 1.0 %) across the six communities fell within a syndrome cluster; two species in the butterfly syndrome and one in the wasp syndrome.

Predictive utility of traditional pollination syndromes

The proportion of plant species for which we empirically determined major pollinators varied across communities (compare 'Total plant species' and 'Total comparisons' rows in Table 2). In most communities, it was $>35\%$ of the species in flower, except for the Guyana and Venezuela communities, in which low rates of flower visitation meant that the pollinators of fewer species could be identified. Not surprisingly, our success in predicting major pollinators of flowers based on the closest idealized syndromes increased when the second closest syndrome was included according to the rules described above. With or without this inclusion, however, the prediction of pollinators was successful for less than half of all plant species overall in all communities except South Africa (Table 2). The mean (\pm s.d.) percentage of correctly predicted species across the six communities was $29.7 \pm 14.1\%$ based on the closest syndrome alone; this rose to $35.0 \pm 13.6\%$ based on a match to either the closest or second closest syndrome in NMDS space.

Some pollination syndromes had greater predictability than others (Table 3). Bee- and fly-pollinated plants, for example, were accurately predicted more frequently from this analysis than other syndromes, whereas beetle and moth pollination were least often predicted. Furthermore, the predictive utility of different syndromes varied across communities. There is no obvious geographical pattern to this variation, although higher elevation sites (>2000 m; California, Colorado and Perú) had more fly-pollinated plants accurately predicted. Tropical communities, for example, did not exhibit greater predictability (see also Table 2), as might have been expected given that they possess on average a greater number of

functionally specialized pollination systems than temperate communities (Ollerton *et al.*, 2006), although a larger sample of communities would be necessary to explore any geographical patterns properly.

It was also expected that predictability might be better for some plant families and worse for others. For example, families such as Lamiaceae and Fabaceae with largely zygomorphic flowers might fall near the bee pollination syndrome, and those with usually radially symmetrical, tubular flowers such as Rubiaceae and Apocynaceae might fall near moth or bird syndromes, whereas those renowned for having a high proportion of generalized pollination systems, such as Asteraceae and Apiaceae, might fare poorly. Table 4 shows that some of these expectations were indeed met. Surprisingly, however, Asteraceae was represented among the successfully predicted families in four of the six communities and in some cases by multiple species. This may be because Asteraceae were widely represented overall in these communities and some taxa had quite functionally specialized pollination systems, such as hummingbird-pollinated *Barnadesia* species in Perú.

Some of the surveys included most of the growing season and thus most of the plant species in the community, whereas others did not. Could this sampling variance have biased our results? We think not. Whereas small samples can miss some plant–pollinator links, and hence bias conclusions about the degree of ecological specialization (Ollerton and Cranmer, 2002; Herrera, 2005; Alarcón *et al.*, 2008; Petanidou *et al.*, 2008), sampling effects on our results are less clear. Variation in sampling should not have affected the analysis of clustering of real floral phenotypes with idealized syndromes, because plant species were randomly sampled. Sampling could have a greater impact on the analysis of the degree to which major pollinators are successfully predicted from phenotypic proximity to the nearest idealized syndrome. The results could be biased if certain syndromes are associated with low visitation rates, and hence left out of the second analysis. It is also possible that undersampling could increase the error in predicting major pollinators; we think this unlikely, however, because undersampling differentially affects observations of rare pollinators, not common ones, and indeed we detected no significant correlation between survey length (in months) and the proportion of correctly predicted pollinators (Spearman's $r = 0.20$, $n = 6$, $P = 0.70$).

DISCUSSION

How does one 'test' the pollination syndromes? This is not obvious, which is probably one reason for the paucity of tests! As we see it, there are three steps. First, one must define what one means by the syndromes. Secondly, one must make the syndromes operational in order to test them quantitatively. Finally, one must decide what properties or predictions of the syndromes are the most important ones to scrutinize.

Numerous definitions seem possible, and, indeed, the syndromes have long had a quality of being something each worker understands but none exactly agrees upon. For example, a recent review (Fenster *et al.*, 2004) first defines syndromes (their p. 376) as evolutionarily convergent suites of

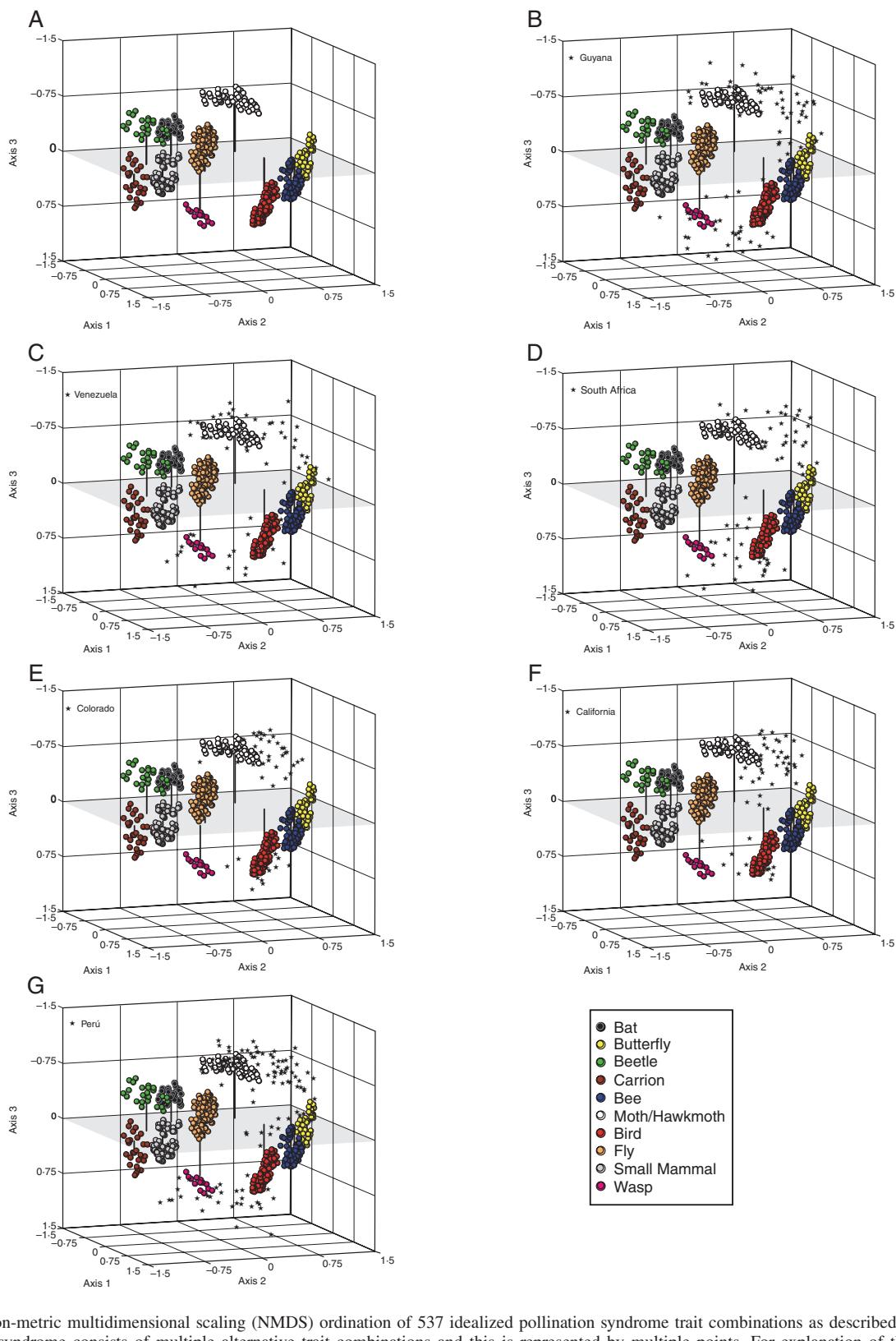


FIG. 1. (A) Non-metric multidimensional scaling (NMDS) ordination of 537 idealized pollination syndrome trait combinations as described in the literature. Each idealized syndrome consists of multiple alternative trait combinations and this is represented by multiple points. For explanation of the axes see text. (B) Ordination of the Kumu, Guyana, plant assemblage (black stars) in the idealized phenotype space. (C) Ordination of the Bahía de Petanamo, Venezuela, plant assemblage (black stars) in the idealized phenotype space. (D) Ordination of the Wahroonga, South Africa, plant assemblage (black stars) in the idealized phenotype space. (E) Ordination of the Virginia Basin, Colorado, plant assemblage (black stars) in the idealized phenotype space. (F) Ordination of the San Bernardino Mountains, California, plant assemblage (black stars) in the idealized phenotype space. (G) Ordination of the Mantanay, Perú, plant assemblage (black stars) in the idealized phenotype space.

TABLE 2. Statistical details of the syndrome prediction analysis for the individual communities

	Guyana	Venezuela	South Africa	Colorado	California	Perú
Total species	92	70	70	55	66	129
Total comparisons	23	14	24	27	44	59
Number of correct placements (closest syndrome)	6	1	12	10	12	18
% correct placements (closest syndrome)	26.1	7.1	50.0	27.0	27.3	30.5
Number of correct placements (first and second closest syndromes)	7	2	13	12	16	18
% correct placements (first and second closest syndromes combined)	30.4	14.3	54.2	44.4	36.4	30.5

'Total species' is the number of plant species in each survey; 'Total comparisons' is the number of plants for which major pollinators were determined; 'Number of correct placements' refers to the number of plants in 'Total comparisons' for which the pollinators were correctly identified using the Euclidean distance to the closest idealized syndrome(s) (see Methods).

TABLE 3. Comparison of the predictive value of individual pollination syndromes for each community, and averaged across all communities

Syndrome	Guyana	Venezuela	South Africa	Colorado	California	Perú	Mean % (s.d.)
Bee	14.3 (1/7)	50.0 (1/2)	23.1 (3/13)	16.7 (2/12)	31.3 (5/13)	0.0 (0/18)	22.6 (17.0)
Beetle	0.0 (0/7)	0.0 (0/2)	0.0 (0/13)	0.0 (0/12)	0.0 (0/13)	0.0 (0/18)	0.0 (0.0)
Bird	0.0 (0/7)	0.0 (0/2)	7.7 (1/13)	8.3 (1/12)	12.5 (2/13)	61.1 (11/18)	14.9 (23.2)
Butterfly	57.1 (4/7)	0.0 (0/2)	15.4 (2/13)	0.0 (0/12)	12.5 (2/13)	0.0 (0/18)	14.2 (22.1)
Fly	0.0 (0/7)	0.0 (0/2)	7.7 (1/13)	75.0 (9/12)	43.8 (7/13)	33.3 (6/18)	26.6 (29.9)
Moth	0.0 (0/7)	0.0 (0/2)	23.1 (3/13)	0.0 (0/12)	0.0 (0/13)	0.0 (0/18)	3.9 (9.4)
Wasp	28.6 (2/7)	50.0 (1/2)	23.1 (3/13)	0.0 (0/12)	0.0 (0/13)	5.6 (1/18)	17.9 (19.8)

Only the seven major types of pollinators which were known to be present in most of the communities surveyed were included. The values are the percentages of plant species which were correctly predicted to have particular major pollinators, organized by pollination syndrome. Figures in parentheses are the number of 'syndrome' matches/number of plant species correctly placed in that community. Note that for the sake of brevity only the results for the assignments to either the first or second closest syndromes have been included.

TABLE 4. Family-level taxonomic identity of the plant species for which pollinators were correctly predicted on the basis of their pollination syndrome (either first or second closest syndrome)

Guyana	Venezuela	South Africa	Colorado	California	Perú
Apocynaceae × 5	Apocynaceae	Apiaceae	Apiaceae × 2	Asteraceae × 4	Agavaceae
Asteraceae	Fabaceae	Apocynaceae × 4	Asteraceae	Caryophyllaceae	Alstroemeriaeae × 2
Rubiaceae		Fabaceae	Caryophyllaceae	Fabaceae × 3	Apocynaceae
		Gentianaceae	Fabaceae	Melanthiaceae	Asteraceae × 5
		Iridaceae × 2	Geraniaceae	Onagraceae × 2	Bromeliaceae
		Orchidaceae × 2	Orobanchaceae	Orobanchaceae	Caryophyllaceae
		Rubiaceae	Plantaginaceae	Plantaginaceae	Ericaceae
		Scrophulariaceae	Polemoniaceae	Portulacaceae	Onagraceae
			Rosaceae	Ranunculaceae	Passifloraceae × 2
			Valerianaceae × 2	Rosaceae	Solanaceae

Note that in some communities more than one species in a family was correctly predicted, as indicated, for example, by 'Apocynaceae × 5'. Families are arranged alphabetically within columns.

floral traits 'associated with the attraction and utilization' of specific 'functional groups' (p. 377ff.) of pollinators. Later (p. 388), a close reading suggests that the 'convergence' and 'trait suite' components of the definition can be relaxed to include any association of floral traits with functional pollinator groups within a specific lineage, whether or not the association adheres to a specific set of floral traits. Finally, these authors speak of adherence to 'traditional syndromes' (p. 395). We have attempted to test only the last of these three definitions, but this raises the question of what the 'traditional syndromes' are. Hence the next task is to choose a

source of syndrome descriptions. We chose Faegri and van der Pijl (1979), with occasional additional guidance from Proctor *et al.* (1996). These sources distinguish syndromes that will not accord with the intuition of all workers [as examples, the bee syndrome is not divided further into syndromes for small vs. large bees, as was done by Vogel (1954) and others; and some workers, such as Hess (1983), omit all aspects of flower shape from syndromes]. Furthermore, they give little or no guidance as to how different floral traits ought to be weighted, so that the default is equal weighting, as we have used. Finally, they imply that one set

of syndromes will apply across geographic regions and plant taxa (below alternatives to such a 'universalist' approach are discussed below). On the other hand, these two books are frequently cited in discussions of pollination syndromes, and provide a starting point for a test.

How do we next prepare the verbal descriptions of syndromes, derived from our source books, for analysis? Whereas it is straightforward to classify a given flower as white or yellow, some other trait descriptions are more difficult to interpret (e.g. 'vivid' colour, 'stiff' anthers), and it took considerable discussion and re-reading of the source texts in order to reach consensus. Acknowledging these difficulties, we now must subject verbal descriptions to quantitative scrutiny. This would be impossible without modern methods of multivariate analysis, which allow the conversion of words into trait vectors. The method used here is NMDS, which is recommended for ordination of binary (+/-) ecological data (Minchin, 1987; McCune and Grace, 2002). In contrast to NMDS, which makes no assumptions about the distribution of the variables, other techniques assume that variables are unimodally distributed [e.g. correspondence analysis (CA) and DCA], or assume linear relationships among variables (e.g. PCA and DFA), thus rendering them inappropriate for data such as ours (McCune and Grace, 2002).

Finally, what properties or predictions of the syndromes should we examine? We have examined their ability to describe actual trait combinations in flowers and to predict major pollinators. Is the latter reasonable? As explained in the Introduction, the pollination syndromes are an evolutionary concept (leaving aside that several strong proponents couched them in essentialist and teleological, rather than strictly Darwinian, terms; see Pancaldi, 1984; Vogel, 1954, 2006). The syndromes describe presumed adaptations to 'attract and utilize' pollinators, i.e. results of past (and potentially ongoing) natural selection on the floral phenotype (e.g. Faegri and van der Pijl, 1979). Therefore, we might expect to see the same types of pollinators at present as those that have formed the pollination (=selection) environment of the past. This argument supports successful prediction of pollinators as one criterion for evaluating the utility of syndromes. It is reasonable to argue, of course, that pollination environments observable at the present time will not always indicate past environments (Ollerton, 1996; Lamborn and Ollerton, 2000; Rivera-Marchand and Ackerman, 2006). We certainly agree that plant–pollinator interactions can be dramatically altered by such things as anthropogenic disruption (e.g. Kearns *et al.*, 1998). On the other hand, we are unaware of any evidence for recent modifications of pollination environments sufficiently widespread to render prediction of pollinators an inappropriate test of syndromes. Furthermore, arguing that current pollination does not reflect past pollination may lead to the conclusion that any observation is consistent with interpreting a given floral phenotype as 'the ghost of pollination past' – in other words, it is in danger of explaining everything, and therefore nothing.

How did the syndromes fare by our test? We found that each idealized syndrome forms a cluster of points in floral phenotype space, and that these clusters segregate reasonably well in the multivariate space. However, the regions of phenotype space that the syndromes define are largely unoccupied by

real plant species. In other words, the combinations of floral traits of real plant species rarely conform exactly to the traditional pollination syndromes (we know, for example, that there are bird-pollinated flowers with blue, zygomorphic corollas, and beetle-pollinated flowers that are small, yellow and unscented, even though the traditional syndromes do not include such combinations). Furthermore, the primary pollinator was successfully predicted by the nearest syndrome for only about one-third of the plant species for which data on pollinator visitation frequencies as well as floral phenotype were obtained. What should we conclude? Most readers might agree that traditional syndromes (as defined above) fail to describe actual floral trait combinations accurately, but success in predicting major pollinators for one-third of all plant species is open to more individual interpretation. There is no disagreement that some fraction of angiosperms produces generalized flowers not strongly adapted to any particular type of pollinator (e.g. Delpino, 1874, p. 364; Proctor *et al.*, 1996, p. 173ff.). If one assumes that this fraction is small, then successful prediction in one-third of all cases is not very impressive, whereas if one assumes (say) that half of all plant species have generalized flowers, then successful prediction in one-third of all species might evoke the opposite reaction. However, in either case, prediction of pollinators from the traditional syndromes alone, as various recent workers have done (e.g. Grant, 1994; Bernardello *et al.*, 1999; Harrison *et al.*, 1999; Hansman, 2001; Perret *et al.*, 2001; Carpenter *et al.*, 2003), seems a risky business.

We stress that we do not take our results as evidence against convergent floral adaptation resulting from pollinator-mediated natural selection. In fact, we adhere strongly to the view that many floral traits reflect adaptive responses to selection by pollinators, and that the direction of selection is a function of properties of pollinator morphology and behaviour (e.g. Waser, 1983). However, we propose that thinking solely in terms of selection by a single 'most effective pollinator' (the most common functional group of visitor, or the one most effective in transferring pollen during a single visit, which are sometimes taken to be the same thing; Stebbins, 1970) fails to capture the range of logical possibilities. Floral adaptation might also be influenced by antagonistic floral visitors (e.g. Strauss and Armbruster, 1997; Strauss and Irwin, 2004), by mixtures of pollinators of different functional types (e.g. Hurlbert *et al.*, 1996; Waser, 1998) and, indeed, by pleiotropic effects on other plant traits (e.g. Rausher and Fry, 1993; Levin and Brack, 1995; Simms and Bucher, 1996). Observed floral phenotypes might even represent adaptations to 'minor' pollinators (Aigner, 2001, 2006), which certainly would contribute to mismatch between observed 'major' pollinators and putative syndromes! We argue for this broader set of perspectives as working hypotheses to explore empirically.

In the end, readers will draw their own conclusions about our test and its results, and it is sincerely hoped that some will devise and implement additional tests. Nonetheless, we would like to end by offering our own personal views on possible directions for future work on these questions. Of course we advocate a continued discussion of the classical syndromes, but our hope is that these will eventually be replaced with a conceptual view of plant–pollinator interactions that is less

classificatory in its aims and that relates directly to both pollinators and antagonists, and their ability to influence the evolution of the floral phenotype, with reference to the phylogenetic constraints or other influences that may also be important. We can think of three general ways to proceed toward this goal. First, we might adopt a 'bottom-up' mechanistic perspective, putting aside the traditional syndromes, starting fresh from simple assumptions about which traits matter most in determining which pollinators visit which flowers, which traits are the result of selection by antagonists and which are a result of the phylogenetic identity of the plant species in question. Such a 'minimalist' approach of identifying only those traits that are important may take us far toward explaining observed patterns of plant–pollinator interactions, and the (majority of) exceptions which do not seem to fit into the classical scheme. Several recent studies exemplify such a strategy. Stang *et al.* (2006) could predict most observed plant–pollinator links in a Spanish community in relation to accessibility of floral reward. Furthermore, such an approach successfully explained observed features of plant–pollinator interaction webs within single communities (Stang *et al.*, 2007) and across multiple communities (Santamaría and Rodríguez-Gironés, 2007). Secondly, we could take a 'top-down' pattern-analytic approach, using multivariate analysis to explore associations between floral traits and pollinator communities. We recognize the grave difficulties here of knowing which traits are relevant to pollinator attraction and use, and of measuring them in ways that reflect pollinator cognition (which varies even within taxa), rather than human cognition (the basis for traditional syndromes). Thirdly, we could use the approach of authors such as Armbruster (1993) and Castellanos *et al.* (2006), among many others, to map floral traits, pollinators and antagonists on to well resolved phylogenies in order to understand the association between particular flower phenotypes and the pollinating vector – a 'pollination systems' approach that requires a combination of rigorous field work and molecular laboratory skills. Currently some workers are using syndromes in this context, but in a more informed way than previously, with some supporting field evidence (e.g. Whittall and Hodges, 2007); however, the role of antagonists vs. pollinators has barely been explored in this regard (though see Armbruster, 1997).

It is not a foregone conclusion that any of these strategies (or others that future workers may devise) will uncover a universal or near-universal set of syndromes. Any syndromes that emerge may turn out to be idiosyncratic to geographic region or plant taxon (see also Ollerton *et al.*, 2003; Fenster *et al.*, 2004; Goldblatt and Manning, 2006). Region-specific traits are suggested by the difficulty of applying traditional syndromes developed in the Northern Hemisphere to the Gondwanan flora (Newstrom and Robertson, 2005), and by the poor predictive value of, for example, the butterfly syndrome in Tasmania (Hingston and McQuillan, 2000), in contrast to the Guyana community surveyed in this study. Taxon-specific traits are suggested by our results, with apparent differences across plant families in the predictive ability of traditional syndromes: Fabaceae, Apocynaceae and (surprisingly) Asteraceae fare better than other families. Indeed, some taxon-specific traits not included in the traditional

syndromes have been emphasized in recent literature, for example the green vs. red floral bracts and differing schedules of pollen presentation correlated with bee vs. hummingbird pollination in *Costus* and *Penstemon*, respectively (Thomson *et al.*, 2000; Kay and Schemske, 2003; Castellanos *et al.*, 2006), and the details of scent chemistry identified by Andersson *et al.* (2002) and Raguso *et al.* (2003). We view such idiosyncrasy, if it is confirmed, as no less interesting in suggesting mechanisms of floral evolution and patterns of floral ecology than universally recognizable end-points such as those proposed by the traditional syndromes.

The possibilities outlined above, and others we have not thought of, will provide exciting grist for the mill of future research, and should help in devising more profitable ways for reducing the dimensionality of floral variation and understanding the evolution of floral phenotypes. The traditional pollination syndromes have contributed a great deal to the development of pollination biology as a field, but our test across diverse communities suggests that the way forward lies in looking beyond them.

SUPPLEMENTARY DATA

Supplementary data are available online at [www.aob.oxfordjournals.org/](http://aob.oxfordjournals.org/) and consist of the following files. (1) Descriptions of the six field sites in which surveys were conducted, and additional information on sampling protocols. (2) The list of 41 floral traits in 13 broad categories used to classify flowers into traditional pollination syndromes and their correlations with the axes from the non-metric multidimensional scaling ordination. (3) A table of the 41 floral traits \times 537 idealized syndrome combinations used to generate the idealized syndrome phenotype space. (4) A list of all of the plant species from each community included in the analyses, together with the predicted pollinator.

ACKNOWLEDGEMENTS

For constructive comments on earlier versions of this manuscript we thank J. Bronstein and her lab group, M. Stang, B. Dalsgaard, C. Herrera, P. Wilson and several anonymous reviewers. A. Erhardt provided the exact original words from Hermann Müller (1882), who has been slightly misquoted ever since (the translation from German is our own). J.O. thanks S. Johnson for hosting the South African study; M. Gillman, V. Roopchand and the staff of the Environmental Protection Agency for facilitating the work in Guyana; M. Kunhardt for permission to work at Wahroonga; P. Joseph and his family for permission to work at Kumu; D. Gopaul and B. Henderson for field assistance in Guyana; S. Kellie for field assistance in South Africa and Guyana; and Sam Tarrant for spreadsheet advice. R.A. thanks S. Acevedo, J. Adams, M. Esqueda, A. Howell, R. Lepe, J. Morachis, S. Ortiz, and L. Que for field assistance in California, and The Wildlands Conservancy and US Forest Service for permission to work there. R.A., N.W. and M.P. thank D. Graydon, D. Ikeda, B. Koch, T. Paterson and B. Peterson for field assistance in Colorado. Permission to undertake fieldwork in Perú was granted by the Director of the National Institute of Natural Resources (INRENA)

— permit numbers: 008799 and 0001982. Financial support came from The Royal Society, The Leverhulme Trust, Church and Co. PLC, EVOLINK, The Percy Sladen Memorial Fund, The Royal Entomological Society and The University of Northampton (to J.O.); and a National Science Foundation Predoctoral Fellowship, the University of California Riverside and the California Alliance for Minority Participation (to R.A.). Elements of this research formed part of the U.C. Riverside PhD dissertation of R.A.

This paper is dedicated to the memory of Dr Christine B. Müller (1961–2008).

LITERATURE CITED

- Aigner PA.** 2001. Optimality modeling and fitness tradeoffs: when should plants become pollinator specialists? *Oikos* **95**: 177–184.
- Aigner PA.** 2006. The evolution of specialized floral phenotypes in a fine-grained pollination environment. In: Waser NM, Ollerton J, eds. *Plant–pollinator interactions: from specialization to generalization*. Chicago: University of Chicago Press, 23–46.
- Alarcón R, Waser NM, Ollerton J.** 2008. Annual variation in the topology of a plant–pollinator interaction network. *Oikos* **117**: 1796–1807.
- Andersson S, Nilsson LA, Groth I, Bergstrom G.** 2002. Floral scents in butterfly-pollinated plants: possible convergence in chemical composition. *Botanical Journal of the Linnean Society* **140**: 129–153.
- Armbruster WS.** 1993. Evolution of plant pollination systems – hypotheses and tests with the neotropical vine *Dalechampia*. *Evolution* **47**: 1480–1505.
- Armbruster WS.** 1997. Exaptations link evolution of plant–herbivore and plant–pollinator interactions: a phylogenetic inquiry. *Ecology* **78**: 1661–1672.
- Beals EW.** 1984. Bray–Curtis ordination: an effective strategy for analysis of multivariate ecological data. *Advances in Ecological Research* **14**: 1–55.
- Bernardello G, Galetto L, Forcone A.** 1999. Floral nectar chemical composition of some species from Patagonia. II. *Biochemical Systematics and Evolution* **27**: 779–790.
- Boyce RL, Ellison PC.** 2001. Choosing the best similarity index when performing fuzzy set ordination on binary data. *Journal of Vegetation Science* **12**: 711–720.
- Carpenter RJ, Read J, Jaffre T.** 2003. Reproductive traits of tropical rainforest trees in New Caledonia. *Journal of Tropical Ecology* **19**: 351–365.
- Castellanos MC, Wilson P, Keller SJ, Wolfe AD, Thomson JD.** 2006. Anther evolution: pollen presentation strategies when pollinators differ. *American Naturalist* **167**: 288–296.
- Consiglio TK, Bourne GR.** 2001. Pollination and breeding system of a neotropical palm *Astrocaryum vulgare* in Guyana: a test of the predictability of syndromes. *Journal of Tropical Ecology* **17**: 577–592.
- Delpino F.** 1873–1874. Ulteriori osservazioni e considerazioni sulla dicogamia nel regno vegetale. *Atti della Società Italiana di Scienze Naturali* **16**: 151–349, **17**: 266–407.
- Eisenberg JF.** 1983. *The mammalian radiations: an analysis of trends in evolution, adaptation, and behavior*. Chicago: University of Chicago Press.
- Faegri K, van der Pijl L.** 1979. *The principles of pollination ecology*, 3rd rev edn. Oxford: Pergamon Press.
- Faith DP, Minchin PR, Belbin L.** 1987. Compositional dissimilarity as a robust measure of ecological distance. *Vegetatio* **69**: 57–68.
- Fenster CB, Armbruster WS, Wilson P, Dudash MR, Thomson JD.** 2004. Pollination syndromes and floral specialization. *Annual Review of Ecology, Evolution, and Systematics* **35**: 375–403.
- Givnish TJ.** 1986. *On the economy of plant form and function*. Cambridge: Cambridge University Press.
- Goldblatt P, Manning JC.** 2006. Radiation of pollination systems in the Iridaceae of sub-Saharan Africa. *Annals of Botany* **97**: 317–344.
- Gleason HA.** 1926. The individualistic concept of the plant association. *Bulletin of the Torrey Botanical Club* **53**: 7–26.
- Grant V.** 1994. Historical development of ornithophily in the western North-American flora. *Proceedings of the National Academy of Sciences, USA* **91**: 10407–10411.
- Hansman DJ.** 2001. Floral biology of dry rainforest in north Queensland and a comparison with adjacent savanna woodland. *Australian Journal of Botany* **49**: 137–153.
- Hargreaves AL, Johnson SD, Nol E.** 2004. Do floral syndromes predict specialization in plant pollination systems? An experimental test in an ‘ornithophilous’ African Protea. *Oecologia* **140**: 295–301.
- Harrison CJ, Möller M, Cronk QCB.** 1999. Evolution and development of floral diversity in *Streptocarpus* and *Saintpaulia*. *Annals of Botany* **84**: 49–60.
- Herrera CM.** 1996. Floral traits and plant adaptation to insect pollinators: a devil’s advocate approach. In: Lloyd DG, Barrett SCH, eds. *Floral biology: studies on floral evolution in animal-pollinated plants*. New York: Chapman and Hall, 65–87.
- Herrera CM.** 2005. Plant generalization on pollinators: species property or local phenomenon? *American Journal of Botany* **92**: 13–20.
- Hess D.** 1983. *Die Blüte: eine Einführung in Struktur und Funktion, Ökologie und Evolution der Blüten*. Stuttgart: Eugen Ulmer.
- Hingston AB, McQuillan PB.** 2000. Are pollination syndromes useful predictors of floral visitors in Tasmania? *Austral Ecology* **25**: 600–609.
- Hurlbert AH, Hosoi SA, Temeles EJ, Ewald PW.** 1996. Mobility of *Impatiens capensis* flowers: effect on pollen deposition and hummingbird foraging. *Oecologia* **105**: 243–246.
- Kay KM, Schemske DW.** 2003. Pollinator assemblages and visitation rates for 11 species of neotropical *Costus* (Costaceae). *Biotropica* **35**: 198–207.
- Kearns CK, Inouye DW, Waser NM.** 1998. Endangered mutualisms: the conservation biology of plant–pollinator interactions. *Annual Review of Ecology and Systematics* **29**: 83–112.
- Knuth P.** 1898. *Handbuch der Blütenbiologie. I. Band: Einleitung und Literatur*. Leipzig: Wilhelm Engelmann.
- Lamborn E, Ollerton J.** 2000. Experimental assessment of the functional morphology of inflorescences of *Daucus carota* (Apiaceae): testing the ‘fly catcher effect’. *Functional Ecology* **14**: 445–454.
- Legendre P, Legendre L.** 1998. *Numerical ecology*, 2nd ed. Amsterdam: Elsevier Scientific.
- Levin DA, Brack ET.** 1995. Natural selection against white petals in *Phlox*. *Evolution* **49**: 1017–1022.
- McCune B, Grace JB.** 2002. *Analysis of ecological communities*. Gleneden Beach, Oregon: MJM Software.
- McCune B, Mefford MJ.** 2006. *PC-ORD: multivariate analysis of ecological data, Version 5.14*. Gleneden Beach, Oregon: MJM Software.
- Minchin PR.** 1987. An evaluation of the relative robustness of techniques for ecological ordination. *Vegetatio* **69**: 89–107.
- Müller H.** 1882. Weitere Beobachtungen über Befruchtung der Blumen durch Insekten, Teil III. *Verhandlungen des naturhistorischen Vereines der preussischen Rheinlande und Westfalens*. Neununddreißigster Jahrgang. Vierte Folge: 9. Jahrgang, 1–104.
- Newstrom L, Robertson A.** 2005. Progress in understanding pollination systems in New Zealand. *New Zealand Journal of Botany* **43**: 1–59.
- Ollerton J.** 1996. Reconciling ecological processes with phylogenetic patterns: the apparent paradox of plant–pollinator systems. *Journal of Ecology* **84**: 767–769.
- Ollerton J, Crammer L.** 2002. Latitudinal trends in plant–pollinator interactions: are tropical plants more specialised? *Oikos* **98**: 340–350.
- Ollerton J, Watts S.** 2000. Phenotype space and floral typology: towards an objective assessment of pollination syndromes. *Det Norske Videnskaps-Akadem. I. Matematisk-Naturvidenskapelige Klasse, Skrifter, Ny Serie* **39**: 149–159.
- Ollerton J, Johnson SD, Crammer L, Kellie S.** 2003. The pollination ecology of an assemblage of grassland asclepiads in South Africa. *Annals of Botany* **92**: 807–834.
- Ollerton J, Johnson SD, Hingston AB.** 2006. Geographical variation in diversity and specificity of pollination systems. In: Waser NM, Ollerton J, eds. *Plant–pollinator interactions: from specialization to generalization*. Chicago: University of Chicago Press, 283–308.
- Ollerton J, Killick A, Lamborn E, Watts S, Whiston M.** 2007. Multiple meanings and modes: on the many ways to a generalist flower. *Taxon* **56**: 717–728.
- Pancaldi G.** 1984. *Teleologia e Darwinismo. La corrispondenza tra Charles Darwin e Federico Delpino*. Bologna: Cooperativa Libraria Editrice.
- Pauw A.** 2006. Floral syndromes accurately predict pollination by a specialized oil-collecting bee (*Rediviva peringueryi*, Melittidae) in a guild of South African orchids (Coryciinae). *American Journal of Botany* **93**: 917–926.

- Perret M, Chautems A, Spichiger R, Peixoto M, Savolainen V. 2001.** Nectar sugar composition in relation to pollination syndromes in *Sinningieae* (Gesneriaceae). *Annals of Botany* **87**: 267–273.
- Pérez F, Arroyo MTK, Medel R, Herskowitz MA. 2006.** Ancestral reconstruction of flower morphology and pollination systems in *Schizanthus* (Solanaceae). *American Journal of Botany* **93**: 1029–1038.
- Petanidou T, Kallimanis AS, Tzanopoulos J, Sgardelis SP, Pantis JD. 2008.** Long-term observation of a pollination network: fluctuation in species and interactions, relative invariance of network structure and implications for estimates of specialization. *Ecology Letters* **11**: 564–575.
- Proctor M, Yeo P, Lack A. 1996.** *The natural history of pollination*. London: HarperCollins.
- Raguso RA, Levin RA, Foose SE, Holmberg MW, McDade LA. 2003.** Fragrance chemistry, nocturnal rhythms, and pollination ‘syndromes’ in *Nicotiana*. *Phytochemistry* **63**: 265–284.
- Ramírez N. 2003.** Floral specialization and pollination: a quantitative analysis and comparison of the Leppik and the Faegri and van der Pijl classification systems. *Taxon* **52**: 687–700.
- Rausher MD, Fry JD. 1993.** Effects of a locus affecting floral pigmentation in *Ipomoea purpurea* on female fitness components. *Genetics* **134**: 1237–1247.
- Rivera-Marchand B, Ackerman JD. 2006.** Bat pollination breakdown in the Caribbean columnar cactus *Pilosocereus rosenii*. *Biotropica* **38**: 635–642.
- Santamaría L, Rodríguez-Gironés MA. 2007.** Linkage rules for plant–pollinator networks: trait complementarity or exploitation barriers? *PLoS Biology* **5**: 354–362.
- Simms EL, Bucher MA. 1996.** Pleiotropic effects of flower color intensity on herbivore performance on *Ipomoea purpurea*. *Evolution* **50**: 957–963.
- Stang M, Klinkhamer PGL, van der Meijden E. 2006.** Size constraints and flower abundance determine the number of interactions in a plant–flower visitor web. *Oikos* **112**: 111–121.
- Stang M, Klinkhamer PGL, van der Meijden E. 2007.** Asymmetric specialization and extinction risk in plant–flower visitor webs: a matter of morphology or abundance? *Oecologia* **151**: 442–453.
- Stebbins GL. 1970.** Adaptive radiation of reproductive characteristics in angiosperms: pollination mechanisms. *Annual Review of Ecology and Systematics* **1**: 307–326.
- Strauss SY, Armbruster WS. 1997.** Linking herbivory and pollination – new perspectives on plant and animal ecology and evolution. *Ecology* **78**: 1617–1618.
- Strauss SY, Irwin RE. 2004.** Ecological and evolutionary consequences of multi-species plant–animal interactions. *Annual Review of Ecology and Systematics* **35**: 435–466.
- Thomson JD, Wilson P, Valenzuela M, Malzone M. 2000.** Pollen presentation and pollination syndromes, with special reference to *Penstemon*. *Plant Species Biology* **15**: 11–29.
- Valdivia CE, Niemeyer HM. 2006.** Do floral syndromes predict specialisation in plant pollination systems? Assessment of diurnal and nocturnal pollination of *Escallonia myrsinites*. *New Zealand Journal of Botany* **44**: 135–141.
- van der Pijl L. 1960.** Ecological aspects of flower evolution. I. Phyletic evolution. *Evolution* **14**: 403–416.
- Vogel S. 1954.** Blütenbiologische Typen als Elemente der Sippengliederung, dargestellt anhand der Flora Südafrikas. *Botanische Studien* **1**: 1–338.
- Vogel S. 2006.** Floral syndromes: empiricism versus typology. *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* **127**: 5–11.
- Waser NM. 1983.** The adaptive nature of floral traits: ideas and evidence. In: Real LA, ed. *Pollination biology*. New York: Academic Press, 241–285.
- Waser NM. 1998.** Pollination, angiosperm speciation, and the nature of species boundaries. *Oikos* **82**: 198–201.
- Waser NM. 2006.** Specialization and generalization in plant–pollinator interactions: an historical perspective. In: Waser NM, Ollerton J, eds. *Plant–pollinator interactions: from specialization to generalization*. Chicago: University of Chicago Press, 3–17.
- Waser NM, Chittka L, Price MV, Williams NM, Ollerton J. 1996.** Generalization in pollination systems, and why it matters. *Ecology* **77**: 1043–1060.
- Whittall JB, Hedges SA. 2007.** Pollinator shifts drive increasingly long nectar spurs in columbine flowers. *Nature* **447**: 706–709.
- Wilson P, Castellanos MC, Hogue JN, Thomson JD, Armbruster WS. 2004.** A multivariate search for pollination syndromes among penstemons. *Oikos* **104**: 345–361.
- Wolfe LM, Sowell DR. 2006.** Do pollination syndromes partition the pollinator community? A test using four sympatric morning glory species. *International Journal of Plant Sciences* **167**: 1169–1175.
- Wolff D, Braun M, Liede S. 2003.** Nocturnal versus diurnal pollination success in *Iseria laevis* (Rubiaceae): a sphingophilous plant visited by hummingbirds. *Plant Biology* **5**: 71–78.
- Zhang L, Barrett SCH, Gao JY, et al. 2005.** Predicting mating patterns from pollination syndromes: the case of ‘sapromyiophily’ in *Tacca chantrieri* (Taccaceae). *American Journal of Botany* **92**: 517–524.

- Scott Bukatman, *Matters of Gravity: Special Effects and Supermen in the 20th Century*. Durham, NC: Duke University Press, 2003, 280 pp.
- Michele Pierson, *Special Effects: Still in Search of Wonder* (Film and Culture Series). New York, NY: Columbia University Press, 2002, 231 pp.
- Aylish Wood, *Technoscience in Contemporary American Film: Beyond Science Fiction* (Inside Popular Film Series). Manchester: Manchester University Press, 2002, 200 pp.

J.P. TELOTTE

The three books considered in this review all – with varying levels of success – contribute to an important and long-needed reassessment of the relationship between film and technology. In academic circles, discussions of this topic have often centred on historical evaluations of audience and industry reception of the latest film technology, or on how genre films, typically science fiction, reflect our attitudes towards scientific and technological development. In both cases, science and technology have most frequently been treated as subjects rather than as the very context for film, as if the intersection of films *about* technology and film's own technological underpinnings was somehow too slippery for sustained scrutiny. Aylish Wood's *Technoscience in Contemporary American Film*, Michele Pierson's *Special Effects* and Scott Bukatman's *Matters of Gravity* approach that intersection in various ways, and suggest further paths for exploration.

The most conventional of these recent books, Wood's *Technoscience in Contemporary American Film*, is still solidly grounded in the tradition of subject studies of science and technology in film. However, it does examine material that has often gone neglected by film studies and cultural studies, largely because of the generic boundaries that conventionally channel much of our thinking; and hence its subtitle, *Beyond Science Fiction*. While it does examine a number of relatively recent and familiar films – *Making Mr Right* (Susan Seidelman, 1987),

Eve of Destruction (Duncan Gibbins, 1991), *Terminator 2: Judgment Day* (James Cameron, 1991), *Twelve Monkeys* (Terry Gilliam, 1995) – all venues where we expect to encounter considerations of contemporary science and technology and the role they play in our lives, *Technoscience* extends that discussion to a variety of films that normally fall outside that generic context by drawing on an underused critical approach, the science studies model provided by Bruno Latour. Employing Latour's notion of 'technoscience' as a conceptual framework to emphasize how science and technology function as cultural constructs rather than as facts and artefacts, Wood draws in a range of films not normally encountered in science-fiction studies: works like *Lorenzo's Oil* (George Miller, 1992), *Medicine Man* (John McTiernan, 1992), *sex, lies, and videotape* (Steven Soderbergh, 1989), and *Edward Scissorhands* (Tim Burton, 1990). Examining these works alongside more conventional science-fiction films, she emphasizes not only how scientific knowledge is constructed and then portrayed in these films, but also how those constructions in turn contribute to the construction of self and of human relationships. In exploring such a wide range of what she terms 'fictions of technoscience' (p. 177), Wood thus profitably opens up new links between the science-fiction genre and other film types, while also offering a valuable catalogue of different intersections between humans and the practices and institutions of technoscience as they have been articulated within recent Hollywood cinema.

Despite this contribution, *Technoscience* is generally a rather uneven achievement. It is certainly marked by a fine attention to the visual details of some films; and the discussions of *Lorenzo's Oil* and *Apollo 13* (Ron Howard, 1995) particularly stand out. However, it is more often rather mechanical, weakly organized, and given to questionable assertions and judgments about which films to employ in analysis. For example, in discussing Fritz Lang's classic *Metropolis* (1927), Wood terms the scientist figure Rotwang 'evil' and 'the villain' of the piece (p. 135). This is one of several simplistic commentaries on that film and is, I believe, ultimately wrongheaded. Elsewhere, she confuses a film's attitude towards science and technology with that of a critic commenting on the film – a mistake that suggests some naive or careless reading of the criticism. And even the author herself allows that *Nell* (1994), Michael Apted's take on 'wild child' narratives, is 'an odd choice ... to discuss' (p. 121) in a chapter on robotics. While *Nell* explores 'the ways in which humanness is learnt' (p. 127) as well as gender issues that the author feels are important to robotic narratives, it is curiously situated alongside films such as the animated feature *The Iron Giant* (Brad Bird, 1999), *Android* (Aaron Lipstadt, 1982), *Alien: Resurrection* (Jean-Pierre Jeunet, 1997), and *Making Mr Right*. In those films such issues are already so very near the surface, so transparent a part of the discourse, that the extended discussion of *Nell* accomplishes little other than to shift the focus away from technoscience – and thus to lose the reader. It does not seem good strategy, and suggests that the book may have been a dissertation that has not been properly reworked.

The sense of a rather crudely finished text also extends to the quality of the book's production. Lacking in illustration and with a singularly unattractive cover – suggesting a kind of industrial focus – this book does not speak well for Manchester University Press's Inside Popular Film series. It is riddled with typos, missing words, dropped letters, doubled words, punctuation errors, spacing problems, and suchlike. On one page (p. 146) I encountered three such errors, all of them glaring and certainly distracting, suggesting shortcomings in the copyediting and proofreading processes. Unfortunately, these repeated problems, combined with a less than felicitous writing style throughout, have resulted in a book that many readers may find irritating and ultimately a bit disappointing to make their way through.

In contrast, Michele Pierson's *Special Effects: Still in Search of Wonder* is an extremely well-produced and well-written work, an impressive entry in Columbia University Press's Film and Culture series that has previously offered a range of influential texts, including Henry Jenkins's *What Made Pistachio Nuts* (1992) and Lucy Fischer's *Designing Women* (2003). While also concerned with the intersections of film, science, and technology, *Special Effects* is ultimately less about film than about film spectators, and more specifically about the audiences for those films – primarily of the science-fiction genre – that depend heavily for their attraction on special effects. While allowing that what we generically term 'special effects' has a history that long predates the cinema and extends to other presentational modes, Pierson's book emphasizes the 'special place' (p. 9) those effects have had in cinematic history and in the reception of certain types of films, and traces that history in order also to point towards the future of film. It thus reminds us that, as we begin speculating on the impact of computer-generated imagery (CGI) in the movies, we must first understand 'how the industrial, institutional, and formal organization of Hollywood science fiction cinema . . . organizes viewers' responses to these effects' (p. 7).

As a first stage in advancing that understanding, Pierson has managed an impressive historical feat, producing a book that is a model of the sort of anthropological investigation that helps us to see film in a broader cultural perspective. Starting with earlier discourses about magic, optical illusions and popular science, *Special Effects* describes the growth of a popular literature of special effects connoisseurship that has, in various ways, influenced both the crafting and the reception of modern science-fiction films. It argues that early effects literature identified the 'spectatorial pleasure' or 'sense of wonder' (p. 46) that was typically a part of effects-oriented entertainment, and that it addressed a lay audience that, in order better to appreciate those effects and to engage that 'wonder', wished to learn how the visual pyrotechnics were accomplished. That same popular discourse, Pierson shows, has been replicated in more recent times with the appearance of

various film-related periodicals, such as *Photon*, *Cinefantastique* and *Cinefex*, that focus on the creation of special effects in science fiction and fantasy cinema. The articles in these magazines consistently seem to address both industry insiders and a broad fan base, treating them all as connoisseurs of effects techniques and, in the process, opening up 'an imaginary continuum' (p. 70) between professionals and fans, wherein fans can carry on a kind of dialogue with professionals, experts can think through their effects techniques in light of fan reactions, and an informed fandom can imagine itself in 'preparation for a career' (p. 69) in special effects or other film work.

This bridging of the gap between insiders and outsiders, Pierson argues, suggests another form of that 'sense of wonder', the development of an aesthetic appreciation that has often been lacking in more traditional discussions of fantastic cinema and has even led to the dismissal of much of that cinema. It is an attitude that all too easily carries over to today's special effects cinema. By looking specifically at the contexts in which an aesthetic discourse on special effects first began to emerge, tracing the translation of that discourse into the contemporary language of cinematic effects and CGI, and underscoring how the contemporary cultural reception of special effects cinema draws on 'some of the same institutional structures and discursive practices that organized older forms of effects connoisseurship' (p. 57), *Special Effects* opens the door to a more informed appreciation and criticism of this cinema and, like Wood's book, to a better sense of the links between contemporary fantasy and more conventional cinemas.

Particularly beneficial is the way in which *Special Effects* frames issues that are crucial to the current trajectory of cinema. It articulates a number of the ethical questions attaching to the field of CGI effects production, it demonstrates the importance of a rhetoric for describing a specifically digital aesthetics, and, better than any other work I have seen, begins to explain the complex cultural and technological nexus that has shaped the contemporary audience's emotional and intellectual engagement with a cinema that is increasingly dominated by special effects. And even as it directs our attention to these new directions, *Special Effects* manages both to remind us of how close current special effects cinema is to the old tradition of a 'cinema of attractions' and to help us better understand an 'aesthetic experience of wonder' (p. 168) that is not limited to the cinema. It is, very simply, an important book and a major accomplishment.

Somewhat in the manner of Pierson's *Special Effects*, Scott Bukatman's *Matters of Gravity* pushes the interdisciplinary and crosscultural investigation of science, technology and film across other boundaries, drawing on theme parks, cyberpunk fiction, comic books and genre film, as well as cinematic special effects to examine a variety of cultural strategies – in film and elsewhere – for dealing with both the uncertainties and possibilities fostered by the contemporary

technoscientific world. More specifically, Bukatman focuses on what he terms 'the experience of technological spectacle in popular American culture' (p. 2), as he stakes out an area that lets him move far from traditional film study while also allowing him to stay connected to – and to suggest important connections with – film's most fundamental project: immersing audiences in a technologically-crafted and compelling imaginative experience. Replicating some of the exuberance he identifies in the technological spectacle of popular culture, Bukatman easily links together a variety of cultural events to suggest a level on which, as Paul Virilio has argued, we have all been 'cinematized'.

Unlike the other books discussed here, *Matters of Gravity* is a collection of previously published essays, dating from 1991 to 2000; and that fact explains a certain level of disjointedness and, in the case of the piece on Disney theme parks, some datedness. The key touchstone and point of connection throughout, though, is very much the same as in Bukatman's earlier book, *Terminal Identity*:¹ the body as it is stressed and transformed 'in the face of disembodied technology' today (p. 7). The postmodern body as it moves through the carefully constructed experience of the theme park, the body as it is exposed, transformed and rendered as design in superhero comics, the body as it adapts to space in film musicals, the body as it is morphed into exaggerated shapes by computer-generated special effects – here is a rather exciting and engaging agenda, even if somewhat familiar to readers of the earlier book. And Bukatman's own fascination with these subjects is tangible, as he repeatedly draws on his personal experience as a model of this larger cultural engagement, and as the essays read less like traditional academic criticism and more like the cultural musings of Mark Dery, as if they represent ongoing dialogues with the media experiences that Bukatman is investigating.

That very engagement is, in fact, both a strength and a weakness of this work. Insofar as *Matters of Gravity* stays connected to lived experience – as it remains anchored in specific films, cultural events, comic figures, even the author's own life – it comes alive. The essays prove insightful and the language at times is eloquent. Certainly, the concluding discussion of the comics and the figure of the 'urban superhero' is a brilliant piece of cultural analysis. Yet whenever the book moves more pointedly in a theoretical direction and away from that sense of engagement, it can seem disconnected and rambling, as with the sections on theme parks and cyberpunk fiction. Part of the problem is that Bukatman brings much knowledge of and sensitivity towards the cultural landscape to his discussions, and the sorting out, the organization, the substantiation sometimes suffer. However, that ability to point to things that *matter* while struggling to stay free of a stultifying academic *gravity*, also makes *Matters of Gravity* a consistently interesting work. Like the other books considered here, it

1 *Terminal Identity: the Virtual Subject in Postmodern Science Fiction* (Durham, NC: Duke University Press, 1993).

situates film, and particularly fantastic or special effects film, within a broad cultural perspective and suggests new ways of considering how this technologically-produced and increasingly technologically-focused art affects our lives.

Alex Hughes and James S. Williams (eds), *Gender in French Cinema*. New York, NY and Oxford: Berg, 2001, 256 pp.

Carrie Tarr with Brigitte Rollet, *Cinema and the Second Sex: Women's Filmmaking in France in the 1980s and 1990s*. New York, NY and London: Continuum, 2001, 328 pp.

James S. Williams (ed.), *Revisioning Duras: Film, Race, Sex*. Liverpool: Liverpool University Press, 2000, 227 pp.

MARTINE BEUGNET

Ever since the advent of sound, French cinema seems to have been in a state of perpetual crisis. And yet in comparison with other European national cinemas, France has successfully maintained a level of production that ensures a remarkable diversity of styles and genres as well as the survival of a crucial independent and auteurist output that parallels or overlaps its mainstream output. Where assessment of this multifaceted production is concerned however, French filmmakers and theorists alike appear dedicated to the national tradition of universalism: gender as a critical category is not readily recognized. While there is a legitimate fear of the stereotyping and ghettoization that categories such as women's films or gay films can create, paradoxically the outright denial of particularities currently leads, as the authors of *Cinema and the Second Sex* put it, to 'obviating debates on the lack of access to representation' (p. 10), as well as of distribution and critical recognition.¹ As a result, approaches informed by gender and feminist theories, even where they apply specifically to French national cinema, have been mainly developed abroad and according to an anglo-saxon critical framework.² The three books reviewed here are thus part of the development of a fertile branch of French film studies that will hopefully also gain readership on the French side.

Gender and French Cinema is an excellent collection, varied yet

1 The authors also remark on the belated translation into French of some of the texts that are considered essential in anglo-saxon film theory. See Ginette Vincendeau and Bérénice Reynaud (eds), 'Vingt ans de théories féministes sur le cinéma', *CinémAction*, no. 67 (1993).

2 There are a few noteworthy exceptions. See for instance, Françoise Audé's *Ciné-modèles, cinéma d'elles* (Lausanne: L'Age d'homme, 1981); and more recently Geneviève Sellier's and Noël Burch's excellent *La Drôle de guerre des sexes du cinéma français, 1930–1956* (Paris: Nathan, 1996).

3 *French Film: Texts and Contexts*
(New York, NY and London:
Routledge, 2000).

coherent, and on a par with Susan Hayward's and Ginette Vincendeau's essential *French Film: Texts and Contexts*.³ If French theory and criticism is known for its disapproval of gender studies, Alex Hughes's and James S. Williams's edited collection stands as a convincing illustration of the richness and significance that gender as an underlying category or as a point of departure can bring to the study of French cinema. Gender is understood in its widest sense; and although the collection does not pretend to be exhaustive, it spans the history of French cinema from the silent era to recent releases, opening up its critical project to a wide-ranging and thought-provoking critical and historical framework. It is diverse in its individual theoretical approaches, with strong essays based on movements or historical trends, as well as those informed by genre, psychoanalysis and star studies.

One of the principal assets of the collection lies in the ability of most of the contributors to address the context and engage with ideological issues while proposing illuminating stylistic/aesthetic analyses. If the few contributions primarily composed of a survey or sampling of films of a particular era or trend arguably provide a more superficial input, they still contribute to the contextualization of the overall theme. *Gender in French Cinema*, far from reading as a disparate series of unrelated articles, offers a simultaneously plural and cogent overview of French cinema.

Elza Adamovicz's essay provides an insightful, convincingly illustrated analysis of surrealist and dadaist cinema. While noting the contradictory pull of the nostalgic and the radical in these films, she highlights the undermining of fixed gender representation effected by dadaist and surrealist aesthetic explorations. Kelley Conway's study of the figure of the music hall singer in 1930s cinema provides a captivating commentary on the interface between gender, race, social mobility and urban space. Williams himself proposes an intricate and engaging reading of Jean Cocteau's film work, outlining in particular the implications of the artist's intriguing technique of reverse motion photography.

Keith Reader and Susan Hayward both offer highly cogent studies of female stars: Reader looks at the controversial and shifting star persona and performance of Arletty, while Hayward underlines the significance of Simone Signoret as a prefeminist star, able to resist the gender stereotyping of her time. Hayward's argument finds interesting echoes in the issues raised by Emma Wilson's piece on contemporary cinema. Sellier and Vincendeau are both concerned with the deconstruction of a masculine discourse: a discourse at work in the films of the new wave in Sellier's case, and in Jean-Pierre Melville's crime thrillers in Vincendeau's absorbing analysis.

Guy Austin focuses on an often overlooked area of French cinema, offering a wide-ranging examination of gender in the peripheral but intriguing universe of French fantasy films. Whereas Austin's

contribution includes analysis of films by Luc Besson and Caro and Jeunet, Phil Powrie focuses on Jean-Jacques Beneix and proposes a psychoanalytical reading that throws into relief the issue of gender in the context of the *cinéma du look*'s culture of masculine youth.

Michael Witt's continuing work on Jean-Luc Godard and Anne-Marie Miéville takes here the form of an enlightening exploration of their television series *France/tour/detour/enfants*. In his chapter, Witt develops a thought-provoking commentary on Godard's and Miéville's representation of the body in movement, combining a critique of the process of 'calibration' and an evocation of the body's resistance to containment. This also relates to issues in Alex Hughes's essay on Hervé Guibert's autobiographical video. Hughes looks at Guibert's critical reworking of the reductive mise-en-scène of the homosexual body as AIDS-text.

Dina Sherzer's, Julia Dobson's and Emma Wilson's essays on the French cinema of the 1990s extend the field mapped out in publications such as *Iris* on recent French cinema.⁴ Sherzer sets out the context and offers useful discussion of the issue of interracial relationships in particular, while Dobson analyzes two recent films by Laurence Ferreira Barbosa and Noémie Lvovsky. Focusing on the issue of femininity, agency and space, her contribution usefully complements previous essays such as those by Conway and Witt.

Finally, Wilson focuses on a controversial area of French cinema: female friendship films. Setting into balance the question of the conflation or opposition of identification and (same-sex) desire in the representation of relations between women, she offers convincing alternative readings of films such as *Mina Tannenbaum* (1994) and *La Vie rêvée des anges* (1998). Wilson's chapter provides a fittingly open ending to a collection that provides a remarkable contribution to the development and broadening of French cinema studies. Thematically, Wilson's paper also recalls aspects of the second book discussed in this review, a study of women in contemporary French cinema by Carrie Tarr with the collaboration of Brigitte Rollet.

The introduction to *Cinema and the Second Sex* reassesses the persistent and intriguing fact that while French cinema boasts the largest number of women directors of all national cinemas (a proportion that far exceeds that of the USA, for instance), French filmmaking, film theory and film criticism appear remarkably resistant to consideration of gender issues, and feminist concerns tend to be dismissed as forms of ghettoization or reactionary vision. From that point of view, the concept of Tarr's and Rollet's book is controversial: France's female filmmakers themselves are usually staunchly opposed to being classified as *women* directors rather than simply as directors. Yet, while the title of the book underlines its Beauvoirian anti-essentialist stance, the authors put forward a convincing argument for mapping out a corpus and a thematic framework defined as gender-specific. In particular, they draw a comparison between the significance

⁴ Maureen Turim (ed.), 'Recent French cinema', *Iris*, no. 29 (Spring 2000).

of women's input (as filmmakers, but also as technicians, scriptwriters and actors) in terms of its variety and quality and its undervaluation by critics and historians of cinema (that film criticism remains a largely male-dominated field in France may not be irrelevant here), and its limited distribution and publicity, particularly abroad.

The book focuses on films directed by women and released in the past twenty years – that is, starting with the period of the backlash that followed the feminist wave of the 1970s. It is organized by theme and by genre, so as to accommodate such categories as auteurism, mainstream postfeminism, and trends related to the 1990s 'return of the political'. Its jargon-free, accessible approach combines a survey of general characteristics with discussion of a large number of individual films. Though brief, these outlines strive to provide a critical thematic analysis as well as some valuable elements of stylistic description. The book examines well-known features, and includes insightful descriptions of important films that are little known, such as Liliane de Kermadec's *La Piste du télégraphe* (1993). Clear and informative, *Cinema and the Second Sex* covers a remarkably broad corpus and provides an essential guide to a currently underpublicized part of French film production.

Revisioning Duras, on the other hand, focuses on a single auteur, one whose work has had a profound and lasting impact on modern French literature and cinema. J.S. Williams's introduction starts with an outline of the controversies that still surround the appraisal of Marguerite Duras's work, before recalling the wide-ranging, momentous significance of her multifarious *oeuvre*. Rarely has the autobiographical element and the media exposure of an author played such a contentious role in the critique of his or her work. The approach underpinning *Revisioning Duras* is described as a step back from biography-centred debates in order to engage with the work within a different thematic framework. If, as one might expect, the essays do not always manage to achieve this, the book does still provide a resonant array of ways of assessing and exploring Duras's work.

The title of this collection of essays is perhaps slightly misleading. Combined with the 'vision' element of the main title, the subtitle – *Film, Race, Sex* – made me expect a book focused primarily on Duras's film work. In effect, there is equal emphasis on the written and the filmic material, and even though the book does not claim to offer an exhaustive study of any specific aspect of Duras's work, as far as film is concerned the extent or the manner in which some of the essays engage with their material is sometimes frustrating. However, Wendy Everett's excellent contribution on Duras's cinema as an art of fugue offers some thought-provoking insight on her work, recalling its ability to subvert established conventions of filmmaking such as the dominance of image over sound, the hegemony of the narrative, the function of the leitmotiv, and the response expected from a spectator/listener.

In 'Screening the vampire', Gill Houghton focuses primarily on *India Song* (1975) and posits an intriguing thematic as the starting point to her piece. Arguably a creative exploration of its subject, Houghton's approach becomes less convincing where it diverts into discussions of other directors' films and draws comparisons that at times may appear not fully developed. Catherine Rodgers's 'Hijacking the hunter' deals with Duras's writing as a film critic. Looking at an article Duras wrote on *The Night of the Hunter* (Charles Laughton, 1955), Rodgers outlines the astounding inaccuracies that underpin her narrative and thematic analysis (Duras does not discuss the historical context or the aesthetic aspects of Laughton's film). The essay brings to the fore the issue of film criticism as a creative activity – a process of 'adaptation' resulting in the production of an independent literary work. However, Rodgers herself acknowledges the uneasy feeling left by Duras's pretence at a certain naivete and her refusal seriously to engage with Laughton's remarkable feature.

In an analysis of *Nathalie Granger* (1972), Owen Heathcote looks at the pervasive yet invisible violence in Duras's work. He offers fertile approaches connecting, for instance, the analysis of figures of metonymy with that of the evocation of violence and its containment. Startlingly, however, though it is included in the section of the book devoted to film, there is mention of neither film aesthetics nor filmmaking techniques in the essay. 'Durasie: women, natives and other', Marie-Paule Ha's solid, synthetic overview and Kate Ince's 'Imaginary white female', on myth, race and the figure of the white woman in *L'Amant de la Chine du Nord*, arguably form the backbone of the book, offering clear and cogent discussions that resonate through a number of other essays.

Martin Crowley looks at the presence of foreign languages in Duras's work. The evocative potential of the technique is evident, yet the figure of the Other that resurfaces in Duras's French writing (mainly in the inclusion of English terms and sentences) appears marked, Crowley concludes, by a reductive, binary slant. Renate Günther's and James Creech's essays offer intriguingly contrasted analyses of the issue of gender in Duras' work. Günther looks at the theme of lesbianism, and outlines how Duras, by positing an 'erotics of sameness', opens up the possibility of female identity not as the male 'other' but as a process of mutual recognition. Creech, on the other hand, provides a critical assessment of homosexuality in Duras's work. Focusing on Duras's opinion of Barthes in particular, Creech shows how she equates homosexuality with the morbid inability to recognize and engage with alterity. Barthes re-emerges, this time through his writings on photography, in Alex Hughes's essay, which offers a further investigation of gender, looking at Duras's photofetishism as a specific form of female fetishism. The reappearance of certain themes and issues in the different essays creates an interesting resonance, and

it is probably through this intriguing pattern of resurgence that the collection works best.

The three books under review testify to the remarkable buoyancy and dynamism of French cinema studies today. Within the wealth of works published in English on French cinema, *Cinema and the Second Sex*'s critical guide book and *Gender in French Cinema*'s excellent collection of essays represent particularly useful means of reassessing, and keeping abreast of, a constantly evolving corpus of films and their readings.

Lalitha Gopalan, *Cinema of Interruptions: Action Genres in Contemporary Indian Cinema*. London: British Film Institute, 2002, 218 pp.

GARY NEEDHAM

Lalitha Gopalan's *Cinema of Interruptions: Action Genres in Contemporary Indian Cinema* is a refreshing intervention in debates about gender, genre, narrative and spectatorship in film studies. Gopalan productively uses her object of study, popular Indian cinema, to explore the authority that concepts such as genre and narrative occupy in film studies through their normative alignment with Hollywood cinema. In this respect, Gopalan avoids the usual route of studying other non-Hollywood cinemas which have focused on national film industries via the limiting discourses of the monocultural context. In turn, these studies establish their own conditions of otherness *vis-à-vis* Hollywood cinema. Rather, Gopalan avoids collapsing Indian cinema into a discourse of otherness, managing the delicate balancing act of remaining culturally specific to her national cinema and at the same time open and interrogative in relation both to the disciplinary space in which she is writing and to the processes of globalization which shape contemporary media forms.

Gopalan thus demonstrates the need for a paradigm shift by addressing the plurality of cinematic forms and experiences and the disjuncture between national cinemas, their canons and the sociocultural contexts that frame them. She organizes her argument around the concept of interruptions in Indian cinema and the instrumentality of genre at the junction of a local/global dynamic.

As the title suggests, *Cinema of Interruptions* is directed towards the action film; but a concern with spectatorship and pleasure is also apparent throughout the book. A 'constellation of interruptions' (p. 3) is an organizing principle of Indian cinema itself, and also informs analyses and debates around censorship, genre, narrative and pleasure

as they pertain both to film theory and to Indian cinema's local and global dimensions.

In her second chapter, 'Avenging women of Indian cinema', Gopalan introduces her first major articulation of the 'interruption' as both textual and institutional, by demonstrating that representations of the female body in Indian rape-revenge narratives are subject to, and regulated by, both the state and the camera. She demonstrates that censorship regulates the representation of rape through the camera's withdrawal from the female body as a sort of textual coitus interruptus. This interruption creates a problematic tension in the initial representation of rape and, subsequently, the nature of the revenge. Gopalan's analysis of Indian rape-revenge films is difficult to separate from other films at the centre of debates around censorship, and from the capacity of film to harness the depiction of rape. Gopalan's analysis raises interesting questions regarding the relationship between interruptions and the representation of rape and revenge. For example, *I Spit on Your Grave* (Meir Zarchi, US, 1978), *The Accused* (Jonathan Kaplan, US, 1988) and *Irréversible* (Gaspar Noé, France, 2002) are all divided in their ability to render rape cinematically through different strategies to represent and contain both the rape, the victim's point of view and/or the acts of revenge. By censoring rape scenes – as has recently happened with the UK video rerelease of *I Spit on Your Grave* – the point of view of the victim is undermined and the revenge recast as unnecessarily harsh, shifting the emotional and generic register of the film from one that is concerned with the trauma of rape to one celebrating the pleasure of violent death through the explicit depiction of killing the perpetrators.

As Gopalan goes on to demonstrate, the regulation and the depiction of rape and the female body by state censorship in Indian cinema inform the pleasures that the films offer their spectators. Thus, she suggests that the 'Indian film industry is dependent on the state as the register of cinematic materiality of generating sadomasochistic pleasure' (p. 48). For Gopalan, women in these films' stories are firstly the real victims of the state's legal institutions, which fail to convict rapists, and are secondly textual victims of the state's film censorship, which enforces the camera's interruption of, and withdrawal from, the representation of rape. One can then see how such enforced interruptions negate the depressing visual horror that filmed rape can embody and the facilitation of the means of identification of the victim's point of view. As Gopalan argues, this does protect women from being the victims of a complicit masculine viewing position in which pleasure is sought through overt and sadistic objectification. On the other hand, it creates another set of spectatorial pleasures that are equally problematic in 'generating sadomasochistic pleasure' (p. 48), based on a balance between the narrative acts of rape and those of revenge. It is on this crucial point that Gopalan's work suggests some wider implications for a consideration of the representation of rape,

taking in issues of censorship, onscreen time, and the balancing act of narrative organization and spectatorial positioning in the depiction of both the act of rape and that of revenge.

Gopalan's focus on gender and violence continues throughout the book, but shifts from the representation of women to, in later chapters, men and masculinity in both the Western and crime film genres. Her second theorization of interruption incorporates numerous different factors in the organization of the interval as an experience of exhibition that accounts for local/global conventions in the Indian appropriation of the Western genre. In chapter three, 'Masculinity at the interval in J.P. Dutta's films', she argues that the interval functions to contain anxieties around the Western's overinvestment in male relationships by being placed at an important junction in the narrative, from where it can inform the overall structure of the film as two halves and disrupt the continuities of male relationships. For example, Gopalan demonstrates that the placing of the interval in Dutta's *Ghulami* (1985) functions 'as a way of regulating homosocial desire firstly through the context of caste and secondly through heterosexual romance' (p. 78). Far from being a disruptive interruption, the interval, its timing and its position in relation to narrative structure is integral in accommodating the translation of the Western from its associated US context to an Indian one.

Gopalan also contributes to the need to foreground the pluralization of difference in cinematic experiences and exhibition contexts as moments of consumption as well as through the effects of textual organization. She challenges the commonsense notion that the interval in Indian cinema is merely an intermission in the perceived tedium of long running times, arguing that it is the 'cornerstone of inventiveness' (p. 71). Gopalan reveals how this inventiveness of the interval's placement as a process of narrative organization in the Indian Western accounts for the audience's experiences and pleasures, experiences which she suggests are concerned with the displacement of male homosocial desires that surface in the Western, and are diffused through the themes of caste and heterosexual romance. Her move to suggest that the local transformation of the Western through the interruption of the interval as a 'cornerstone of inventiveness' itself reveals that such inventiveness is a strategy both conservative and heteronormative.

Through the analysis of the multiplicity of interruptions in Indian cinema, *Cinema of Interruptions* offers a new reading of the pleasures and textual organizations of Indian cinema. By framing interruption through the experience of spectatorship and the study of rape-revenge narratives, the Western and other action genres, Gopalan shows the extent to which we must broaden our understanding of both film texts and cinemagoing from its normative alignment with Hollywood, while continuing to acknowledge the economically and culturally hegemonic dynamic of the Hollywood film from the vantage point of global/local

tensions. Gopalan's book in itself thus serves as an interruption that will inform the tenets of film studies so that they may reflect the plurality of cinemas in a global context.